

MINUTES OF THE SENATE UTILITIES COMMITTEE

The meeting was called to order by Chairman Jay Emler at 9:30 A.M. on February 8, 2007 in Room 526-S of the Capitol.

Committee members absent:

Committee staff present: Raney Gilliland, Kansas Legislative Research Department
Mike Corrigan, Revisor of Statutes
Tatiana Lin, Legislative Fellow
Ann McMorris, Committee Secretary

Conferees appearing before the committee:

Colin Hansen, Executive Director, Kansas Municipal Utilities
Rick Anderson, General Manager, McPherson Board of Public Utilities
Colin Whitley, Director of Electric & Water Utilities, City of Winfield, Kansas

Don Gaeddert, City Manager, City of Larned, Kansas (written testimony only)

Others in attendance: See attached list

Chair opened the hearing on

HB 2032 - Deregulation of municipal gas and electric utility's rates, charges and terms and conditions of service in area more than three miles outside municipality.

Colin Hansen, Executive Director, Kansas Municipal Utilities, urged adoption of **HB 2032** which would allow municipal electric and natural gas utilities with customers more than three miles outside corporate limits to locally control their rates and conditions. This legislation would save significant time, effort and resources both for municipal utilities and the staff of the KCC. (Attachment 1)

Rick Anderson, general manager, McPherson Board of Public Utilities. stated their utility supports **HB 2032** because it would help to alleviate the significant administrative headaches currently caused by the three-mile statutes. (Attachment 2)

Colin Whitley, director of electric & water utilities, City of Winfield, Kansas, noted the existing three mile statutes have made it very difficult for their utility to provide comparable service within their service territory. Most municipal utilities will not file with KCC for modifying rates, terms and conditions unless it is absolutely necessary because of the burdensome paperwork. (Attachment 3)

Written testimony was provided by Don Gaeddert, city manager, City of Larned, Kansas. (Attachment 4)

Chair closed the hearing on **HB 2032**.

Presentation on High Performance Buildings

Hans Nettelblad of BNIM Architects and member of the Board of Directors for the American Institute of Architects in Kansas, introduced the Committee to high-performance building design and the "Triple Bottom Line - a methodology of "accounting" which balances the social (people), environmental (planet), and economic (prosperity) impacts of our design decisions. AIA believes there is an immediate need to strengthen the State of Kansas' commitment to sustainable design and, more specifically, high-performance buildings. He reviewed "first cost" concerns, electrical energy consumption, benefits of daylighting, and utilization of other resources that require abundant energy consumption. He announced that AIA plans on drafting legislation on adopting a comprehensive high-performance building standard and initiative towards carbon neutral buildings for consideration later in the year'. (Attachment 5)

Adjournment.

Respectfully submitted,
Ann McMorris, Secretary
Attachments - 5



kansasmunicipalutilities

Submitted Testimony Provided the

Senate Utilities Committee

February 8, 2007

*Colin Hansen, Executive Director
Kansas Municipal Utilities*

House Bill 2032 – Deregulation of Municipal “Three-Mile” Customers

Under existing statutes, the customers of municipal electric and natural gas utilities located more than three miles outside of city limits currently fall under the jurisdiction of the Kansas Corporation Commission (KCC). Municipal utilities serving these customers are required to secure approval from the KCC through a formal rate filing should they wish to modify their utility rates, charges or terms and conditions.

KMU strongly supports House Bill 2032. The language in HB 2032 was originally drafted as a compromise between KCC staff and KMU members and would allow municipal electric and natural gas utilities with customers more than three miles outside corporate limits to locally control their rates and conditions. The legislation provides numerous safeguards for current customers. In summary, KMU believes the legislation would save significant time, effort and resources both for municipal utilities and the staff of the KCC.

What HB 2032 Does

In lieu of the KCC requiring a formal rate request and subsequent economic and engineering analyses from a municipal electric or gas utility for their “three-mile” customers, the municipal utility would instead have local control and jurisdiction over the rates of these customers. For municipal utilities, control and oversight of rates, terms and conditions fall under locally-elected city councils or commissions. In a handful of cases, municipal utilities are governed by a locally-elected or appointed board of public utilities.

As part of this compromise legislation, HB 2032 requires that the rates and charges for these rural “three-mile” customers not exceed the rates and charges of those customers within city boundaries, even though the cost to serve them is nearly always higher.

*Table 1. Municipal Electric Utilities
with KCC Jurisdictional Customers*

	"Three Mile" Customers	Total Customers
Anthony	284	1,954
Ashland	4	705
Burlingame	14	603
Clay Center	96	2,801
Coffeyville	61	6,931
Larned	3	2,621
McPherson	1,182	8,312
Pomona	20	547
Pratt	46	3,966
Russell	231	3,301
Sabetha	87	1,723
Sterling	12	1,169
Wellington	99	4,352
Winfield	1,035	8,194
Total	3,174	47,179

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Customers Affected

In Kansas, 14 municipal electric utilities and 19 municipal gas utilities have at least one customer more than three miles outside their city limits (see Tables 1 and 2). In total, 3,174 municipal electric utility customers would be impacted by HB 2032. This represents just over one percent of all municipal electric customers in Kansas (and 0.2% of all electric customers in Kansas). The number of municipal gas utility customers that the bill affects is 1,281. A total of 4,455 customers would be impacted.

Safeguards

A number of safeguards are built into the compromise language to ensure that existing “three-mile” customers are not adversely impacted. Such safeguards include:

- “Three-mile” rates must mirror in-town rates
- “Three-mile” rates must not increase more than 10% in a given year
- Notice of any proposed changes in rates must be provided to “three-mile” customers
- Annual report submitted to the KCC
- A petition by 25% of a utility’s “three-mile” customers will trigger KCC investigation of municipal rates. KCC may order removal of unjust or unreasonable rates.

Table 2. Municipal Natural Gas Utilities with KCC Jurisdictional Customers

	"Three Mile" Customers	Total Customers
Alma	42	456
Alta Vista	167	397
Auburn	346	905
Aurora	16	67
Burlingame	31	576
Eskridge	405	698
Garden Plain	18	291
Harveyville	1	138
Jamestown	32	188
LaCygne	39	497
Longford	51	47
Milford	60	253
Morland	26	116
Palmer	4	75
Pawnee Rock	1	152
Rozel	13	123
Spearville	7	333
Uniontown	3	149
Winona	19	113
Total	1,281	5,574

Benefits

The primary benefit of the legislation is to standardize the manner by which municipal utilities are allowed to charge rates to their customers.

Removing the requirement of a formal rate filing to modify the rates of jurisdictional customers would alleviate a big administrative headache for many municipal systems. The time associated with filling out paperwork for these customers is the top complaint of the municipal utilities with three-mile customers, particularly if there are only a handful of such meters served by the utility.

In addition, KMU believes that passage of the bill would reduce the time and resources currently required of the KCC to review filings, monitor annual reports, and generally keep track of jurisdictional municipal utility customers. The 4,455 such customers in Kansas are a very small subset of the overall Kansas consumers for whom the KCC is responsible.

Conclusion

KMU believes that House Bill 2032 would be beneficial to its membership by removing a significant administrative burden on municipal utility management and personnel. In addition, the bill

would allow municipal utilities to offer new services and rates that might currently be infeasible due to the cost of a formal rate filing. We believe the legislation might also benefit the Kansas Corporation Commission by removing the administrative headache that reviewing provisions for a small subset of municipal customers imposes on the agency.

Testimony Provided the

Senate Utilities Committee

House Bill 2032 - Municipal Utility Three-Mile Legislation

February 8, 2007

**Rick Anderson
General Manager
McPherson Board of Public Utilities**

Chairman Emler and Members of the Committee:

I am Rick Anderson, General Manager of the McPherson Board of Public Utilities. The McPherson Board of Public Utilities, or BPU, provides electric and water utility service to over 14,000 residents in McPherson, Kansas. Our utility is proud to claim 234 megawatts (MW) of generation and one of the lowest electric rates in the country. In addition, the utility has been instrumental in creating and supporting the McPherson Industrial Development Company (MIDC), a quasi-governmental agency that has purchased and developed over 200 acres of land for industrial development in the city.

Currently, approximately 14% of BPU's customers are located more than three miles outside of McPherson city limits. Of the thirty-one municipal utilities that currently fall under partial jurisdiction of the Kansas Corporation Commission (KCC), I'm told that BPU serves the largest number of KCC jurisdictional customers with 1,182 such consumers.

I greatly appreciate the opportunity to appear before the committee today in strong support of House Bill 2032. **The primary reason the utility supports this legislation is that it would greatly help to alleviate the significant administrative headaches currently caused by the three-mile statutes.** For many years, BPU has complied with all the necessary filings, reports and inquiries triggered by our service to the three-mile customers. During that time, to my recollection, we have not had a complaint filed at the KCC regarding how we operate our utility or charge for electricity.

Filing the required information at the KCC for this subset of our customers is extremely cumbersome and time consuming. The administrative expense, in both staff time and funds to employ consultants and attorneys, in many cases discourages municipal utilities like ours from pursuing common sense business decisions. Should a rate increase become necessary, the cost of a full-blown rate

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case can be very high. Many times, such costs make these actions prohibitive for our municipal systems.

If this legislation be enacted, I do not envision BPU at all changing the terms and conditions in which it provides electric service to its customers. In fact, I believe that the KCC rules and regulations that govern how a utility provides service are an excellent template for how a utility should operate in the state of Kansas. Even if we as a municipal utility do not fall under the jurisdiction of the commission, BPU will continue to follow these guidelines to the best of its ability as it has to this date.

McPherson BPU and other municipal electric and gas utilities encourage the committee to pass House Bill 2032. Thank you again for the opportunity to appear before at this hearing and I would be glad to stand for any questions that the committee might have.

Testimony Provided the

Senate Utilities Committee

House Bill 2032 - Municipal Utility Three-Mile Legislation

February 8, 2007

**Colin Whitley
Director, Electric & Water Utilities
City of Winfield, Kansas**

Chairman Emler and Members of the Committee:

Thank you for the opportunity to testify this morning in support of House Bill 2032, legislation that would streamline the rate setting procedures for municipal electric and natural gas utilities with customers more than three miles outside of their city boundaries.

My name is Colin Whitley, Electric and Water Utilities Director for the City of Winfield. Winfield currently operates municipal electric, natural gas, water and wastewater utilities. Our municipal electric utility serves 8,194 electric meters, which includes all of the city's roughly 12,000 citizens. In addition to being Electric & Water Utilities Director for Winfield, I also have the honor as serving as the first Interim General Manager of the Kansas Power Pool or KPP. KPP is a new municipal energy agency that is currently providing power supply to seven municipal utilities, with eleven new entities slated to take service in 2007.

Winfield provides retail electric service to 1,035 customers (including the cities of Burden and Dexter) that are located more than three miles outside of the Winfield city limits. In fact, I'm one of those customers. In addition, Winfield provides wholesale electric service to the cities of Oxford and Udall. Winfield's municipal natural gas utility does not have any KCC jurisdictional customers outside the three-mile limit.

Existing three-mile statutes have made it very difficult for our utility to provide comparable service within our service territory. Submitting a full-blown rate filing and corresponding economic and engineering analyses are burdensome enough to keep most municipal utilities from modifying rates, terms and conditions unless absolutely necessary.

In fact, the three-mile statutes are currently an obstacle to Winfield offering wind energy to our three-mile customers. Last year, the city surveyed its customers and determined that approximately 5% wanted the city to purchase wind energy

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on their behalf and pay for it in a special rate class. This new "wind energy rate" will be considered for approval by the Winfield City Commission later this month.

Unfortunately, the rate will only be offered to those customers within three miles of Winfield city limits. The city would be unable to recover the significant cost necessary to formally secure KCC approval of the new wind energy rate structure on behalf of what is likely to be only a handful of customers. As a result, the wind rate will not be offered to three-mile customers. Should the three-mile statute be changed, Winfield would offer the wind energy service to all customers equally as is our preference.

One of our colleague utilities, Clay Center Public Utilities, has also expressed strong support for the bill. Asked about how they might implement the changes the bill would require, the city indicated that they would simply lower electric rates for the 96 customers currently under KCC jurisdiction to match city rates. In justifying the rate decrease, the Superintendent of Utilities for the city noted that current reporting requirements were a "big enough headache that I'll gladly lose revenue to do it." He added that current statutes have kept the utility from even modifying the terms and conditions of the yard light rental program the city currently offers.

Again, thank you for the opportunity to testify this morning in support of House Bill 2032. I strongly encourage the committee to pass this legislation that would do much to streamline and assist 31 municipal electric and gas utilities in Kansas.

Written Testimony Provided the

Senate Utilities Committee

House Bill 2032 - Municipal Utility Three-Mile Legislation

February 8, 2007

**Don Gaeddert
City Manager
City of Larned, Kansas**

Thank you for the opportunity to offer written testimony in support of House Bill 2032, the municipal electric and natural gas deregulation bill. My name is Don Gaeddert, City Manager for Larned, Kansas in rural Pawnee County. Larned currently operates municipal electric and water utilities and provides service to its 4,236 citizens.

In addition to being Larned City Manager, I also serve as the 2006-2007 President of Kansas Municipal Utilities (KMU), the statewide trade association for 170 municipal electric, natural gas, water, and wastewater utilities. Legislation that would remove the significant administrative burden caused by current "three-mile" statutes has long been a priority of KMU and its membership and I appreciate the chance to offer strong support of House Bill 2032.

The City of Larned currently has three customers that are located more than three miles outside of the city's corporate boundaries. Unfortunately, the location of these three customers puts the city under the partial jurisdiction of the Kansas Corporation Commission (KCC) and requires Larned to meet a number of regulatory provisions. One example is an annual financial report that the city must file with the KCC every year. This report creates a headache for city personnel while providing very little benefit to state regulators.

In addition, to modify the rates of these three customers requires a full regulatory filing at the commission. The time and cost to develop such a filing is very prohibitive, particularly for cities with very few jurisdictional customers. As a result, Larned has not touched the rates of these customers in the thirteen years I have been city manager. In fact, the table on the top of the following page illustrates fairly effectively that the difficult process of applying for a rate increase with the KCC discourages such application. As a result, the KCC jurisdictional customers go through lengthy periods during which they are most likely not paying their fair share of utility costs.

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Larned City Rate Increases	Larned KCC Jurisdictional Customer Rate Increases
1991	1991
1990	
1984	
1979	
1978	
1976	
1973	
	1968
1963	
1960	

On behalf of the KMU Executive Committee, KMU Board of Directors, and my own council in Larned, I thank you for the chance to offer this written testimony in support of House Bill 2032. I strongly encourage the committee to pass this legislation that would do much to streamline and assist 31 municipal electric and gas utilities.

February 8, 2007



TO: Senate Committee on Utilities
FROM: Hans Nettelblad, AIA, LEED™ AP
RE: High Performance Buildings and the “Triple Bottom Line”

Good Morning Chairman Emler and Members of the Committee, I am Hans Nettelblad, of BNIM Architects and I serve on the Board of Directors for the American Institute of Architects in Kansas. I am here on behalf of the AIA Kansas to introduce the Committee to high-performance building design and the “Triple Bottom Line – a methodology of “accounting” which balances the social (people), environmental (planet), and economic (prosperity) impacts of our design decisions.

AIA Kansas is a statewide association of architects and intern architects. Most of our 700 members work in over 120 private practice architectural firms designing a variety of project types for both public and private clients. The rest of our members work in industry, government, and education where many manage the facilities of their employers and hire private practice firms to design new buildings or to renovate/remodel existing buildings.

We recently made a presentation to the House Committee on Energy and Utilities regarding HB2036 and, based on what we see in that particular bill and in Senate Bill SB120, AIA Kansas believes there is an immediate need to strengthen the State of Kansas’ commitment to sustainable design and, more specifically, high-performance buildings.

Sustainable design is a holistic design and decision-making process which considers all three elements of the triple bottom line equally and concurrently when designing a high-performance building, community, or landscape. The health and productivity of the user, the impact on our natural resources and environment, and the distinct and quantifiable fiscal advantages resulting from this balanced approach are interdependent from the beginning of the design process, and continuing on through the lifetime operation of the building. Focusing on any one of the three aspects comes at the detriment of the others, and, consequently, either the people, the planet, or our prosperity are negatively impacted.

A simple illustration – choosing a less efficient mechanical (heating, ventilation and air-conditioning) system in order to save “first-cost” construction dollars impacts life-cycle costs in several ways – increased energy usage costs, decreased user productivity and increased worker absenteeism due to discomfort and illness, and increased air pollutants. These often unforeseen fiscal costs over the life of the building to the owner, and natural costs to user health and environment far exceed the monetary savings initially realized at the outset of the project. This is just one very basic example of something that could be solved through the course of the collaborative, integrated sustainable design approach

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required for high-performance buildings. Our intent moreover is to emphasize to you the vast importance of high-performance building legislation, as it relates to the life cycle considerations of all building types – residential, commercial, industrial, retail, and governmental – all ultimately paid for by the residents of Kansas.

This type of legislation is certainly not new - some examples of design standards already in place by other government agencies: the General Services Administration, 12 states (Arizona, California, Connecticut, Colorado, Hawaii, Maine, Michigan, Nevada, New Mexico, Rhode Island, Washington, and Wisconsin) and more than 20 major cities have adopted the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED™) series of guidelines as their high performance building standard. In addition, about a month ago the District of Columbia established that all private development meet the USGBC LEED™ design standards.

With particular regard to “first-cost” concerns – studies indicate that achieving high-performance standards such as LEED™ are showing little to no premium. In *“The Costs and Financial Benefits of Green Buildings”*, 2003, Greg Kats, Capital E (www.cap-e.com) data on 33 LEED™ buildings built in California revealed an average first cost premium of 1.84%. In *“Costing Green: A Comprehensive Cost Database and Budgeting Methodology”*, 2004, Lisa Fay Matthiessen, Peter Morris, Davis Langdon data revealed certain market rate buildings did not target the LEED™ standard, but met it unknowingly. “The David and Lucile Packard Foundation Building For Sustainability Matrix”, 2002 by BNIM Architects shows that high-performance building is the best social, economic and environmental design approach; this would especially hold true for a long-term owner such as the State of Kansas.

Last year the state of Missouri's new Lewis and Clark State Office building received a LEED™ Platinum Certification, the highest certification level available. It was completed on an construction budget which was appropriated seven years prior to project start, but the building was still designed and operates 50% more efficiently than the baseline energy code. This building is but a singular example of what could also be readily achievable in the State of Kansas. However, this is only one project - its impact alone is microscopic when compared to the effect mandatory legislation imposed on all building design and construction would otherwise have on the health and economy of our citizens and State - and as already illustrated in the presentation, other states have already recognized the importance of this issue and passed the necessary legislation to begin addressing this ordeal.

With specific regard to electricity, buildings make-up 76% of all electrical energy consumption in the United States; therefore, targeting efficiency of new buildings stands to make a significant impact on the triple-bottom line. One example - maximizing natural daylighting in a building not only reduces the energy required to power artificial lighting, but also contributes greatly to the performance and production of the building user. Abundant research has been conducted solely on the positive effects of daylighting in both office buildings and schools. Several case studies published by the Heschong Mahone Group, Inc. (www.h-m-g-com) and the Greening Schools Project (www.greeningschools.org) provide detailed, quantified data substantiating this one

sustainable design technique. Environmentally, every kilowatt-hour saved in our region will have an impact in reducing green house gas emissions - of the ten Environmental

Protection Agency Emission Regions, ours emits the second most Carbon Dioxide and the most Nitrogen Oxide. Likewise with existing buildings, requiring greater efficiency for renovations and upgrades would also have similar if not greater outcomes, given the frequency owners and agencies opt to renovate buildings they currently own, rather than assuming the greater costs of building anew.

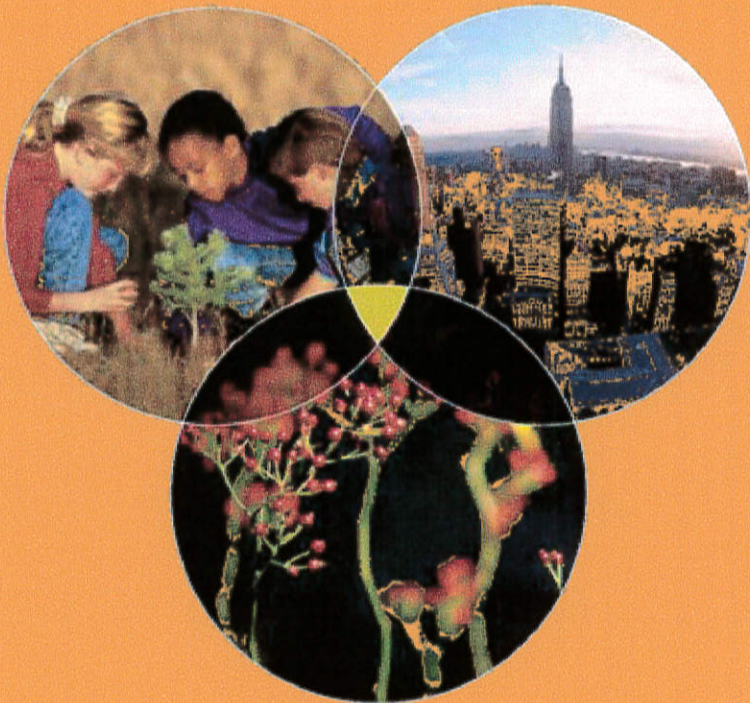
Beyond daylighting in our office buildings and schools, further studies have indicated high-performance buildings contribute to earlier discharge in hospitals, increased productivity in factories, and increased sales/s.f. in retail spaces. It is therefore not surprising we see an increase in USGBC membership (LEED Certification), especially when taking into account the financial performance statistics of LEED companies as compared to other typical publicly-traded companies.

In addition to electricity, other resources are utilized heavily through the design, construction and operation of buildings that require abundant energy consumption. Just a few are delivering reliable potable water, providing end users transportation to and from the building, and the many processes involved in harvesting, manufacturing and installing products. Again, a comprehensive high performance building standard will provide significant reductions in the use of these other natural resources, non-renewable energy sources, waste production, and promote regeneration of natural resources. We propose that such a standard should also require documentation of the measurable contributions towards resource use reduction, in order to monitor and record data for future development.

Universally, based on the vast amount of research conducted and data compiled to date, we as architects (and, unfortunately, significant contributors to this dilemma), are striving to help establish a level of design which altogether maximizes both the human potential and economic vitality of our built environment, while concurrently sustaining the natural environment. A few days ago, the Intergovernmental Panel on Climate Change (IPCC) released "Climate Change 2007: The Physical Science Basis – Summary for Policymakers", its fourth assessment of human activity and the consequent environmental impacts, further substantiating the need for a significant change in our way of thinking, building, and living (www.ipcc.ch).

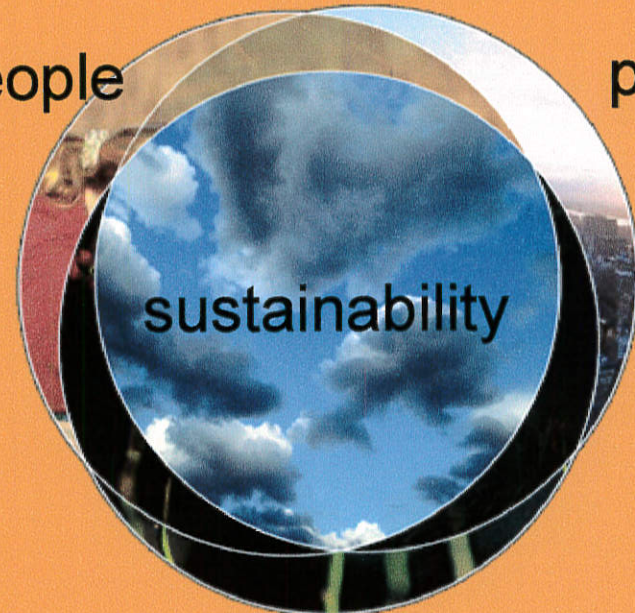
In response, AIA Kansas wants to work with your Committee and the State of Kansas in adopting not only a comprehensive high-performance building standard, but also potential future legislation which reaches even farther beyond these milestones, in the same spirit as the AIA 2030 Challenge initiative towards carbon-neutral buildings. As a follow-up to this introduction, the AIA Kansas will prepare draft legislation ready for your input and consideration later in the year. Thank you for allowing us the opportunity to make this presentation - I will be happy to answer any questions you may have.

Philosophy: Triple Bottom Line



people

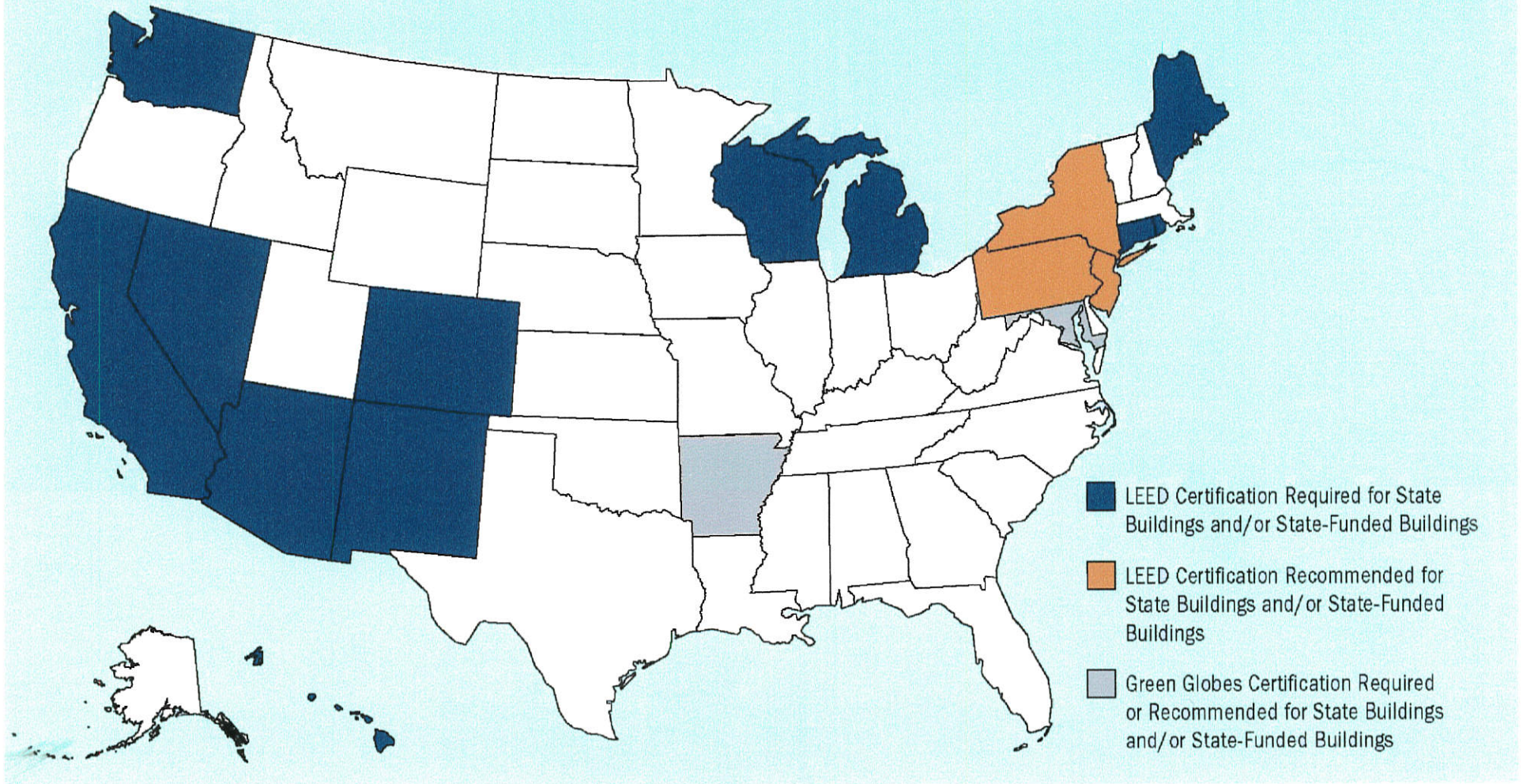
planet



prosperity

Green Building Standards at the State Level

Data from Pew Center on Global Climate Change - www.pewclimate.org



Cities that have adopted the USGBC's LEED Standard

More than 20 municipalities are requiring or plan to require LEED Certification of their projects

Seattle

Chicago

Portland

New York

Austin

Santa

Monica

Denver

Kansas City



Mayor Daley's vision of making Chicago the greenest city in the nation is about providing healthy air and water, being wise in our energy use, and conserving resources. But it's also about increasing Chicago's competitive edge: making the city a place where people want to come live, visit and start their businesses.

Low First Cost Premium

1-9

First Cost Premium
(per LEED™ Level)

A Report to
California's Sustainable
Building Task Force
October 2003
Greg Kats, Capital E

Figure III-1. Level of Green Standard and Average Green Cost Premium

Level of Green Standard	Average Green Cost Premium
Level 1 – Certified	0.66%
Level 2 – Silver	2.11%
Level 3 – Gold	1.82%
Level 4 – Platinum	6.50%
Average of 33 Buildings	1.84%

Source: USGBC, Capital E Analysis

The Costs and Financial Benefits of Green Buildings, 2003, Greg Kats, Capital E
<https://www.usgbc.org/ShowFile.aspx?DocumentID=1992>

Lewis and Clark State Office Building

Jefferson City, Missouri



Platinum on a budget:

Four story office building

120,000 square feet

425 occupants

\$17.5 million

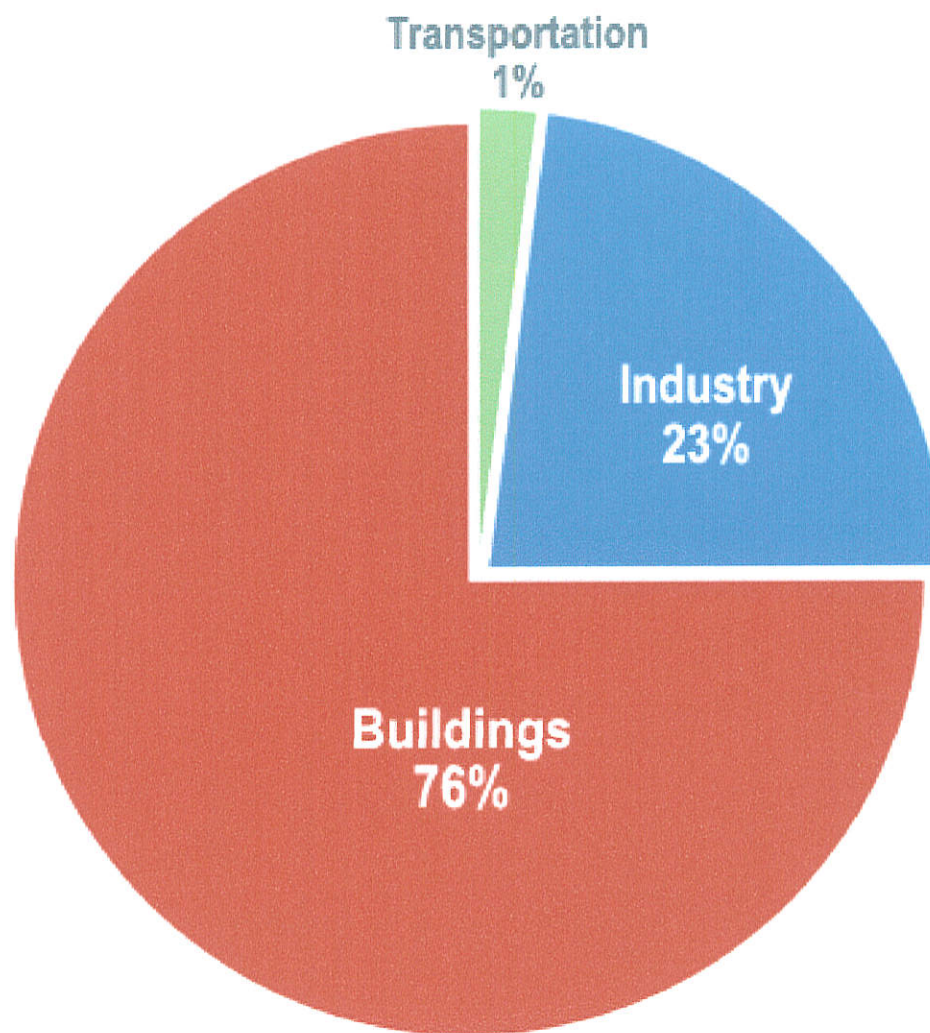
\$145 / SF

53 LEED credits achieved

50% more efficient than
ASHRAE 90.1-2001

6-5

U.S. Electrical Energy Consumption

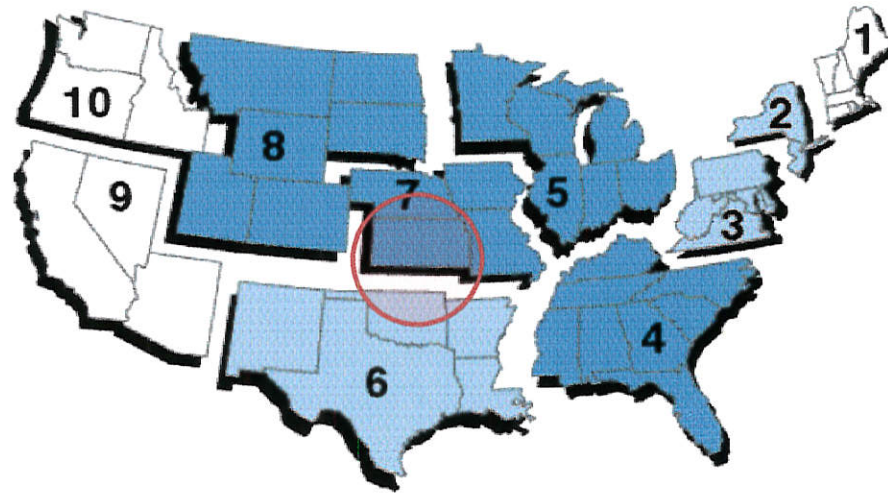


"Unknowingly, the architecture and building community is responsible for almost half of all U.S. greenhouse gas emissions annually. Globally the percentage is even greater."

U.S. ELECTRICAL ENERGY CONSUMPTION

Source: U.S. Energy Information Administration

EPA Pollution Emission Regions



Map of pollution prevented per 1,000 kWh saved.

EPA Pollution Emission Region	Carbon Dioxide pounds/year	Sulfur Dioxide pounds/year	Nitrogen Oxide pounds/year
1	1,100	8.8	3.1
2	1,200	7.5	2.9
3	1,600	7.1	5.5
4	1,500	15.2	5.5
5	1,800	22.9	7.7
6	1,700	4.9	5.5
7	2,000	7.7	8.6
8	2,200	7.3	7.1
9	1,000	2.4	3.3
10	100	1.1	0.7

47% of Kansas CO₂ emissions comes from electrical power generation

**Increased
Productivity.**

SCHOOLS

**20%
BETTER TEST
PERFORMANCE**

HOSPITALS

**2 1/2 DAY
EARLIER
DISCHARGE**

RETAIL

**INCREASE
IN SALES
PER SQUARE
FOOT**

FACTORIES

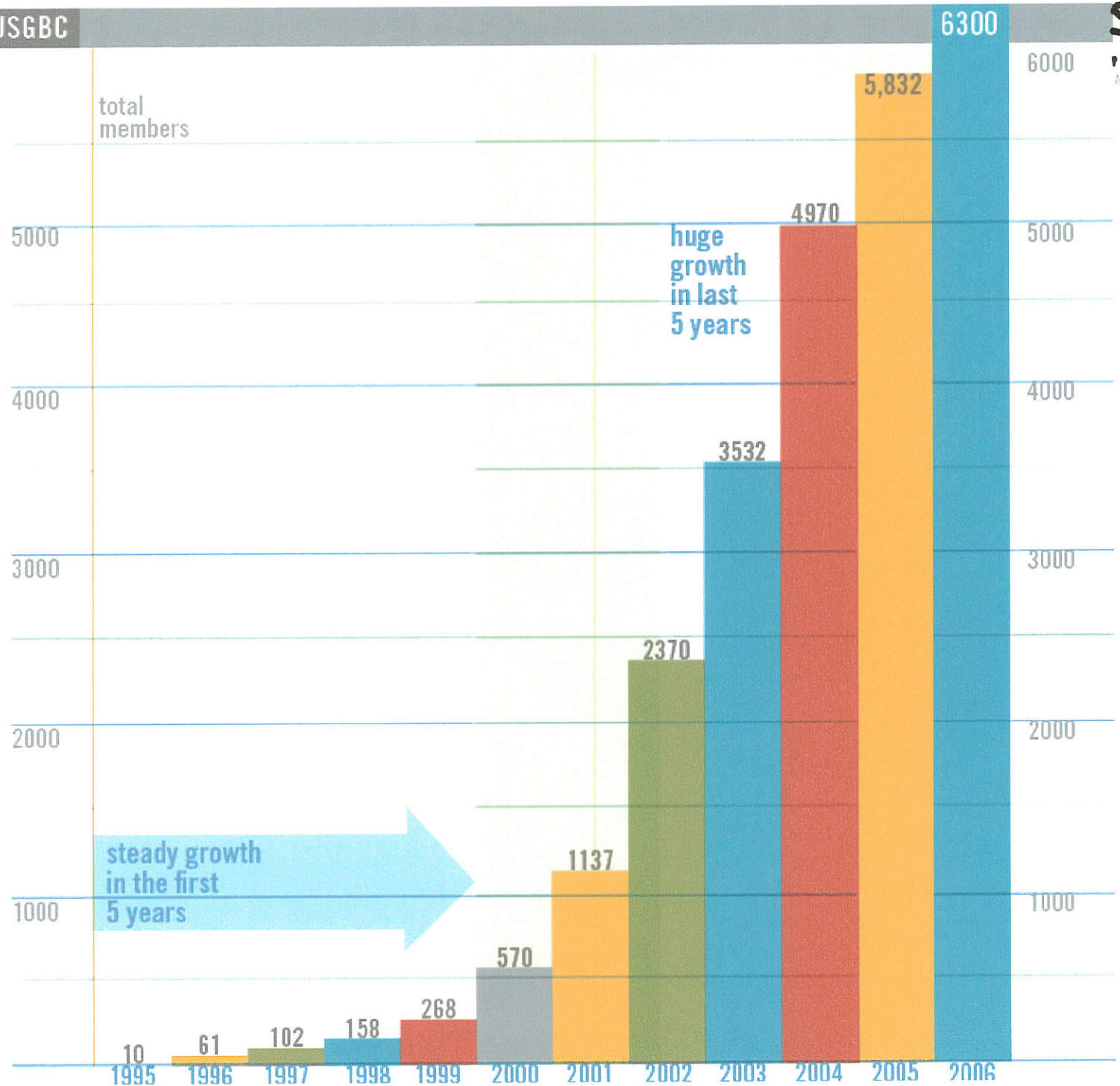
**INCREASED
PRODUCTION**

OFFICES

**2-16%
PRODUCTIVITY
INCREASE**

11-5

USGBC membership growth reflects the expansion of green buildings in the market.



5/12

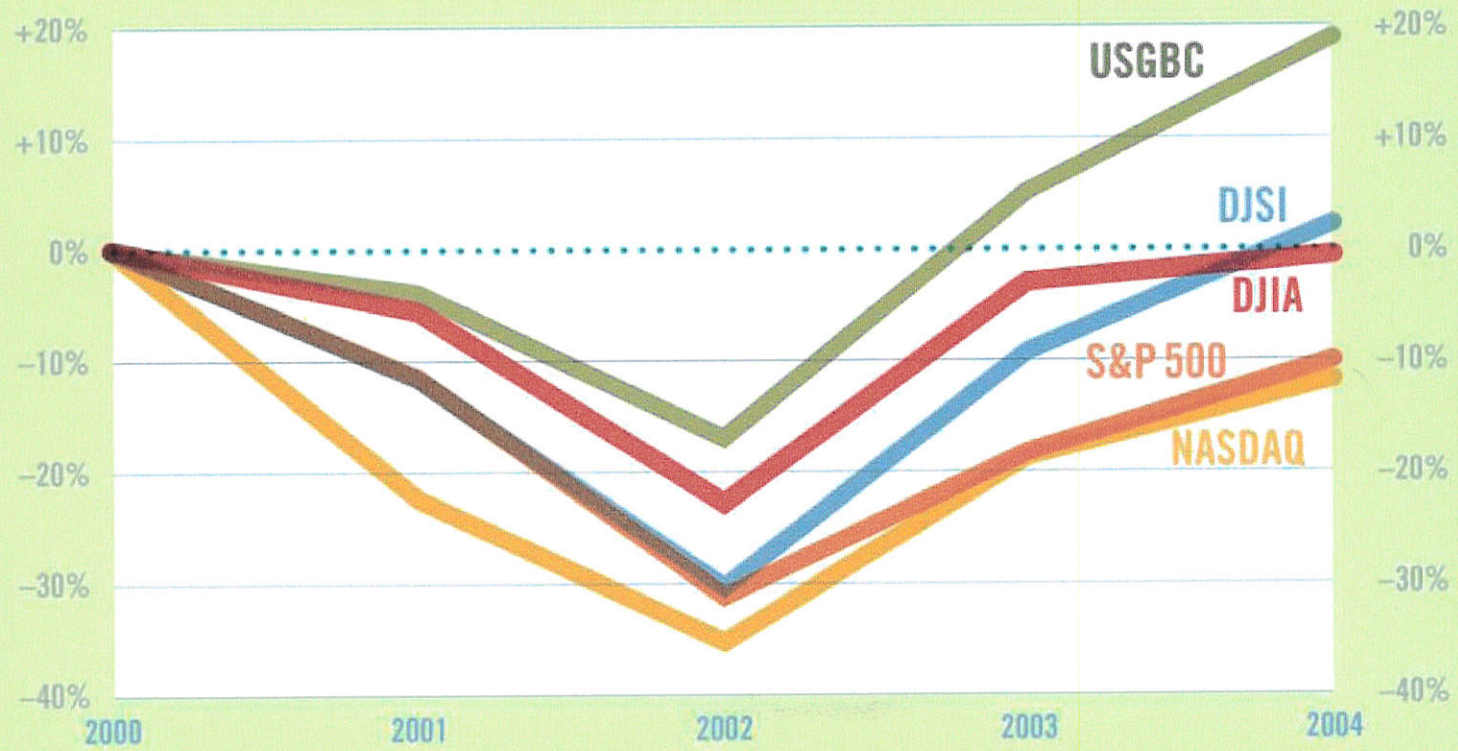
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LEED Companies Financial Performance

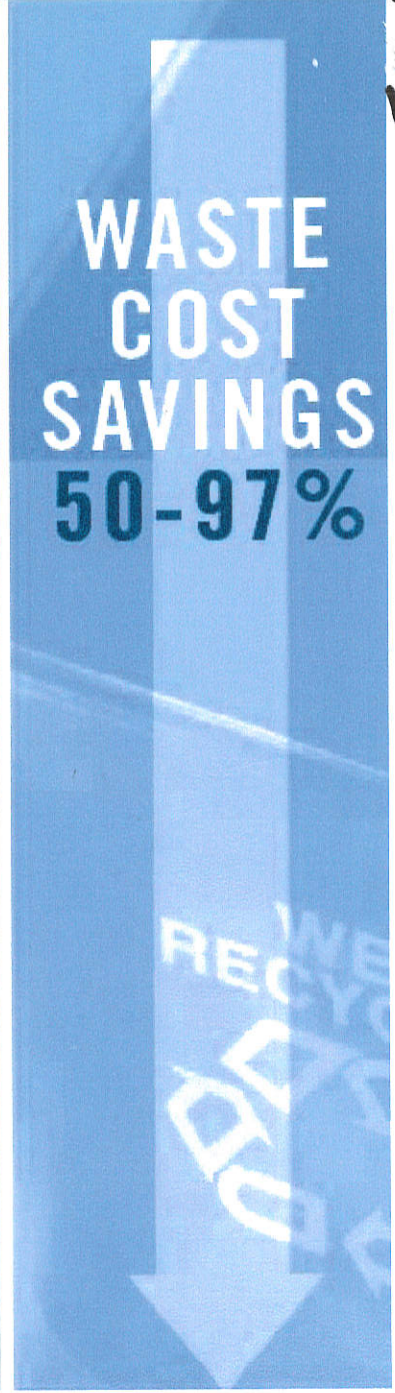
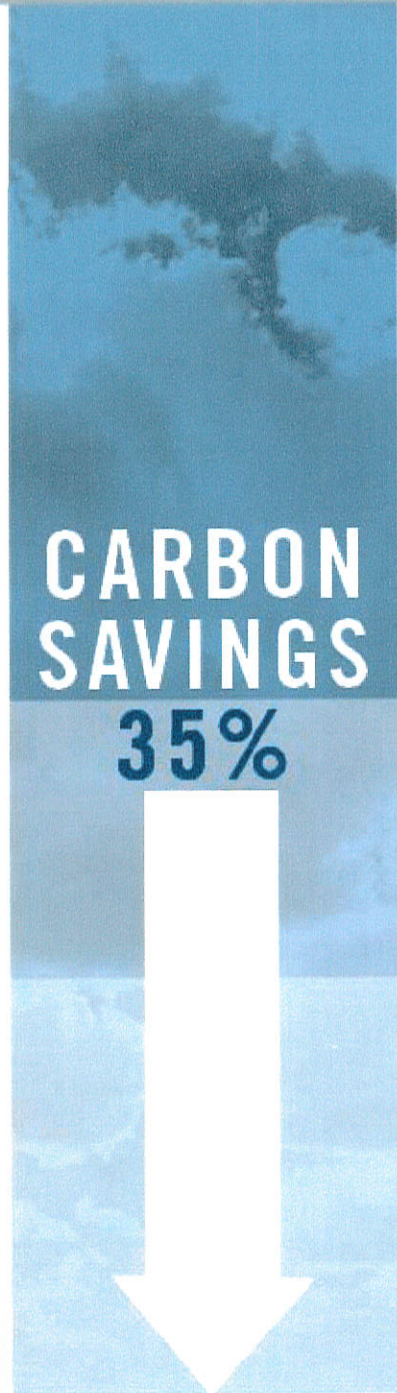
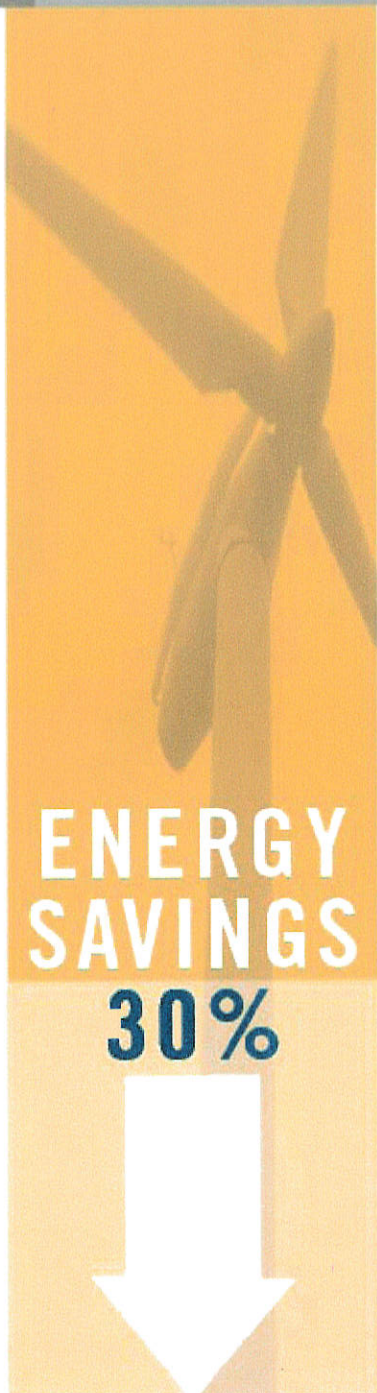
INTRODUCTION USGBC PARTNERS KEYNOTE SPEAKERS QUESTIONS CONCLUSION

LEED Companies Financial Performance

Comparison of Publicly Traded USGBC Weighted by Market Cap vs. Market Averages



Average Savings of Green Buildings

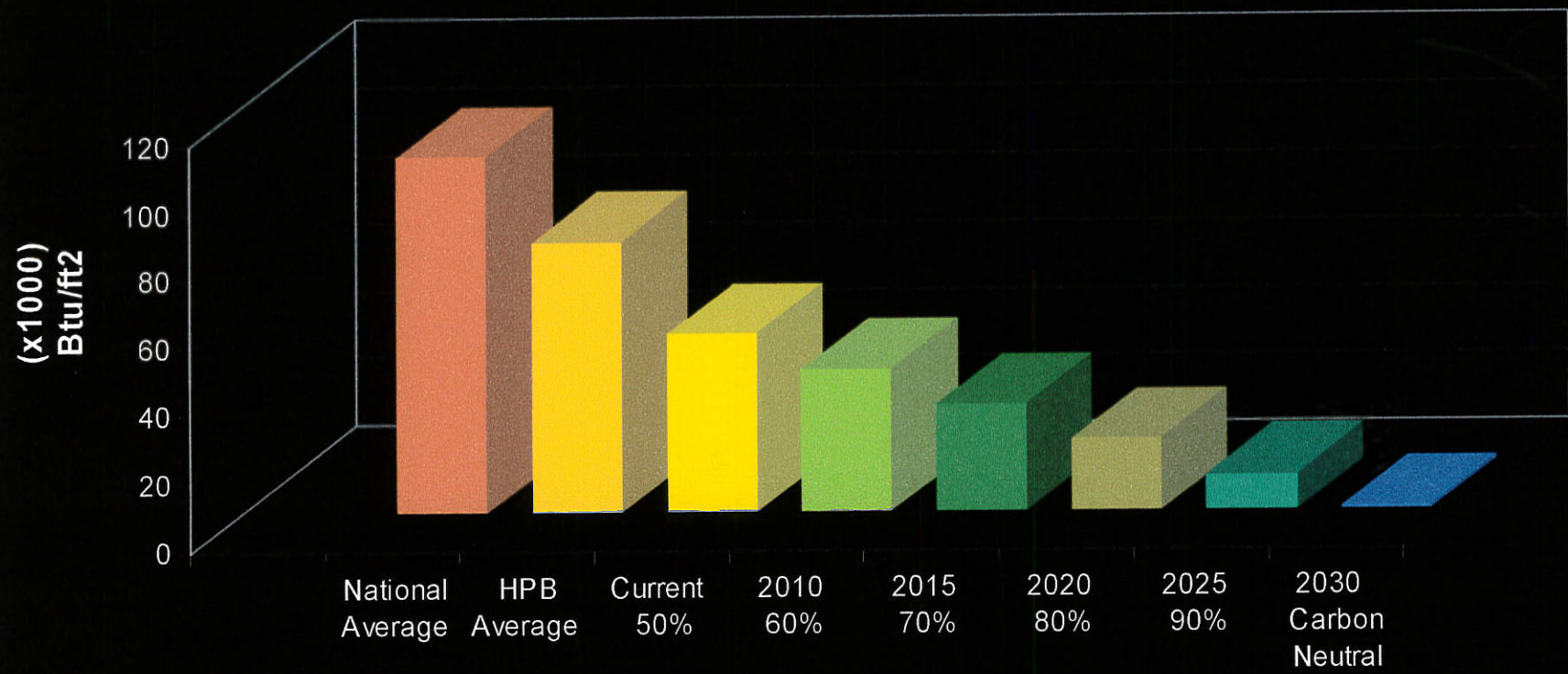


41.5



Source: Capital E

Energy Intensity (Btu/ft²) for Office Building Type and AIA 2030 Challenge Targets



National Average: 2006 Building Energy Data Book of Department of Energy

High Performance Building (HPB) Average: Derived from High Performance Building Case Studies on the BuildingGreen.com Database.

Building For Sustainability: Sustainability Matrix

Building Form

Energy, Pollution and External Cost to Society

Schedules

Short and Long Term Costs

☉ = 5 Households
 ☉ = Energy Consumed by the Building
 ☉ = Energy Generated by the Building
 Width of Bar = Amount of Energy Required
 Height of Bar = % of Energy Obtained from the Grid
 ■ = Carbon Dioxide (tons) - Global Warming
 ■ = Sulfur Dioxide (lbs.) - Acid Rain
 ■ = Nitrogen Dioxide (lbs.) - Smog
 ■ = Particulate Matter < 10 Microns (lbs.) - Air Quality

■ = Additional Research
 ■ = Design
 ■ = Construction

All of these figures are based on cost estimates created for each conceptual building model. All costs shown have been adjusted from actual cost estimates to reflect a \$10 million Market Building as a baseline. The Net Present Values indicated represent 30-, 60- and 100-year cost models that are based on 5% cost of capital, 1-1.2% inflation rate and 5% annual increase in energy costs.

Living Building	Plan	Wall Section	Energy to Operate Building	Grid Reliance	Pollution from Building Operation (20 yr.)	External Cost to Society (20 yr.)	Schedule	Construction Cost	Furniture, Fixtures and Equipment	Design and Management Fees	Net Present Value	Living Building
LEED™ Platinum 100 Year Building 45 Wings Solar Orientation Natural Daylighting Living Machine*			89			\$0		\$12.9 m	\$1.7 m	\$2.0 m	\$18.7 m (30 year model) \$19.6 m (60 year model) \$20.8 m (100 year model)	LEED™ Platinum
LEED™ Gold 100 Year Building 45 Wings Solar Orientation Natural Daylighting Natural Ventilation			89			\$0.7 m		\$12.1 m	\$1.6 m	\$1.7 m	\$18.3 m (30 year model) \$23.7 m (60 year model) \$62.2 m (100 year model)	LEED™ Gold
LEED™ Silver 80 Year Building 45 Wings Solar Orientation Natural Daylighting			150			\$1.3 m		\$11.5 m	\$1.6 m	\$1.5 m	\$18.5 m (30 year model) \$27.8 m (60 year model) \$95.8 m (100 year model)	LEED™ Silver
LEED™ Certified 60 Year Building 90 Wings Natural Daylighting			208			\$2.0 m		\$11.3 m	\$1.5 m	\$1.5 m	\$19.7 m (30 year model) \$36.7 m (60 year model) \$166.9 m (100 year model)	LEED™ Certified
Market 40 Year Building 120 Wings Big Box			250			\$2.5 m		\$10.1 m	\$1.4 m	\$1.3 m	\$19.6 m (30 year model) \$45.3 m (60 year model) \$218.4 m (100 year model)	Market
Market 40 Year Building 120 Wings Big Box			461			\$3.2 m		\$10.0 m	\$1.3 m	\$1.3 m	\$22.7 m (30 year model) \$62.9 m (60 year model) \$348.9 m (100 year model)	Market

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State Green Building Laws

States	Legislation/ Executive Order	Description/ Website
Arkansas	Legislation	<p>On March 29, 2005 Arkansas House Bill 2445 was passed, followed by passage in the Senate on April 6, 2005. The Conservation of Energy and Natural Resources in the Design of State Building Projects Through the Use of Sustainable Building Practices Act.</p> <p>In recognition of the economic, energy conservation, and environmental benefits of sustainable building design, to initiate a process to encourage improved building practices, to provide support and information to assist state agencies in the design of public buildings, and to continue development of best building practices through a legislative task force to evaluate and recommend building practices to be made under this subchapter.</p> <p>State agencies conducting or funding a public building project or rehabilitation project are encouraged to refer to and appropriate the Leadership in Energy and Environmental Design or Green Globes rating systems referred to in this act.</p> <p>The bill also establishes a Legislative Task Force on Sustainable Building Design and Practices.</p> <p>http://170.94.58.9/ftproot/acts/2005/public/act1770.pdf</p>
Connecticut	Legislation	<p>On May 26, 2006, the State passed Public Act 06-187 which requires the adoption of regulations to adopt buildings that meet or exceed the silver building rating of LEED for new commercial construction and major renovation projects. Prior to the 2007 Legislative Session, the House Committee on Environmental Protection, and the Commissioner of Public Safety will work together to develop regulations to implement this act.</p> <p>http://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&bill_num=923&which_bill=1</p>
Louisiana	Legislation	<p>Prior to the 2007 Legislative Session, the House Committee on Commerce will produce a report studying the feasibility of requiring certain public buildings to meet green/high-performance building standards. The Louisiana House of Representatives will analyze the results of the study before acting on H.B. 498.</p> <p>http://www.legis.state.la.us/billdata/streamdocument.asp?did=370517%20</p>
Maryland	Legislation	<p>On March 26, 2005 the Maryland House passed HB 196, followed by the passage of SB 92 on April 4, 2005. This bill requires that all state-funded building projects meet green/high-performance building standards. The bill states that a "high performance building" is one that:</p> <ul style="list-style-type: none"> Achieves at least a silver rating according to the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Green Building Rating System; Achieves at least a two globe rating according to the Green Building Initiative's Green Globes program; Achieves at least a comparable numeric rating according to a nationally recognized, accepted, and appropriate rating guideline, or standard; OR Meets nationally recognized, consensus-based, and accepted green building guidelines, standards, or systems as determined by the Department of General Services. <p>http://mlis.state.md.us/2005rs/billfile/sb0092.htm</p>
Nevada	Legislation	<p>On June 17, 2005 Nevada Governor Guinn signed into law AB3 which states:</p> <p>Each occupied public building whose construction will be sponsored or financed by this State must, when completed, meet the equivalent of the base level or higher in accordance with the Leadership in Energy and Environmental Design Green Building Rating System, or an equivalent standard, as adopted by the Director of the Office of Energy pursuant to section 11 of this act.</p> <p>During each biennium, at least two occupied public buildings whose construction will be sponsored or financed by this State must, when completed, meet the requirements to be certified at or meet the equivalent of the silver level in the Leadership in Energy and Environmental Design Green Building Rating System, or an equivalent standard, as adopted by the Director of the Office of Energy pursuant to section 11 of this act.</p> <p>http://www.leg.state.nv.us/22ndSpecial/bills/AB/AB3_EN.pdf</p>
Washington	Legislation	<p>On April 8, 2005 Washington Governor Christine Gregoire signed into law ESSB 5509, requiring state-funded public buildings to use high-performance green building standards. The bill states that:</p> <p>The legislature finds that public buildings can be built and renovated using green/high-performance methods that make workers more productive. Green/High-performance public buildings are proven to increase student test scores and reduce energy and utility costs.</p> <p>Sec. 3 (1) All major facility projects of public agencies receiving any funding in a state capital budget must be designed and constructed to meet the LEED silver standard.</p> <p>(2) All major facility projects of any entity other than a public agency or public school district receiving any funding from the state must be designed and certified to at least the LEED silver standard.</p>

		<p>(3)(a) Public agencies, under this section, shall monitor and document ongoing operating savings resulting from certified as required under this section.</p> <p>Sec. 4 (1) All major facility projects of public school districts receiving any funding in a state capital budget must meet the silver standard or the Washington sustainable school design protocol.</p> <p>(2) Public school districts under this section shall: (a) Monitor and document appropriate operating benefits and designed and constructed as required under this section for a minimum of five years following local board acceptance report annually to the superintendent of public instruction.</p> <p>http://www.leg.wa.gov/pub/billinfo/2005-06/Htm/bills/Senate%20Passed%20Legislature/5509-Gov.Janet.Napolitano.signed.Executive.Order.#2005-05.on.February.11.2005.The.Order.states.that.all.Executive.Order.extent.practicable.the.following.standards.in.all.new.state-funded.facilities.</p>
Arizona	E.O.	<p>a. Renewable Energy: All new state-funded buildings constructed after the date of the Executive Order shall be 10 percent (10%) of their energy from a renewable resource.</p> <p>b. Energy Efficiency: The design for all state-funded buildings constructed after the date of the Executive Order shall meet or exceed the design standards set forth in the Arizona Revised Statutes 34-451 and Executive Order 2003-14.</p> <p>c. LEED Standard: All state-funded buildings constructed after the date of the Executive Order will meet at least LEED Silver Design standard.</p> <p>http://www.governor.state.az.us/eo/2005_05.pdf</p>
California	E.O.	<p>Gov. Arnold Schwarzenegger signed Executive Order #S-20-04 on December 14, 2004. The Order states that California entities under the direct executive authority of the Governor must cooperate in taking measures to reduce grid-dependency by 20% by 2015, through cost-effective efficiency measures and distributed generation technologies; these measures include:</p> <p>2.1. Designing, constructing and operating all new and renovated state-owned facilities paid for with state funds to meet or exceed the design standards set forth in the California Energy Efficiency Act of 2005; and</p> <p>2.2. Identifying the most appropriate financing and project delivery mechanisms to achieve these goals; and</p> <p>2.3. Seeking out office space leases in buildings with a U.S. EPA Energy Star rating; and</p> <p>2.4. Purchasing or operating Energy Star electrical equipment whenever cost-effective.</p> <p>http://www.dot.ca.gov/hq/energy/ExecOrderS-20-04.htm</p>
Colorado	E.O.	<p>Gov. Bill Owens signed Executive Order #D005 05 on July 15, 2005. The Order directs the Executive Directors of the Department of Personnel and Administration to develop and implement policies and procedures to promote environmental sustainability in their current business operations and develop and implement policies and procedures to promote environmental sustainability including, but not limited to:</p> <p>i. Adopting the United States Green Buildings Council's Leadership in Energy and Environmental Design Green Building (LEED) in operating, maintaining and managing existing buildings, to the extent applicable and practicable.</p> <p>ii. Incorporating LEED for New Construction (LEED-NC) practices to design energy and resource efficient new buildings that are cost-effective.</p> <p>iii. Initiating an energy management program to monitor and manage utility usage and costs, as resources become available.</p> <p>B. I hereby direct the Executive Directors of the Governor's Office of Energy Management and Conservation, Department of Personnel and Administration, to establish a Colorado Greening Government Coordinating Council and department.</p> <p>http://www.colorado.gov/governor/eos/d00505.pdf</p>
Florida	E.O.	<p>On November, 10, 2005, Governor Jeb Bush issued Executive Order #05-241 which, among other things, explores energy conservation and efficiency initiatives. As a result of the Executive Order, the State Department for Environmental Protection requires all new government buildings to meet U.S. Green Building Council LEED standards.</p> <p>http://www.dep.state.fl.us/energy/fla_energy/files/energy_plan_final.pdf</p>
Maine	E.O.	<p>Gov. John Baldacci issued an Executive Order on November 24, 2003 regarding the use of LEED building standards for new construction and renovation of State buildings.</p> <p>1. The design, construction, operation and maintenance of any new or expanded State building shall incorporate the United States Green Building Council's Leadership in Energy & Environmental Design ("LEED") Version 2.1, or the most recent version of LEED, provided this can be accomplished on a cost-effective basis, considering construction and operating costs over the life cycle of the improvement.</p> <p>2. The design, construction, operation and maintenance of any existing State building to be renovated shall incorporate the United States Green Building Council's Leadership in Energy & Environmental Design ("LEED") Version LEED-EB, or the most recent version of LEED, provided this can be accomplished on a cost-effective basis, considering construction and operating costs over the life cycle of the improvement.</p>

		http://www.maine.greenpower.org/tools/ExOrder-LEEDbldgs-11-03.pdf
Michigan	E.O.	<p>Gov. Granholm signed Executive Order #2005-4 on April 22, 2005. The Order states that the Department of Management and Enterprise Services shall set an energy efficiency savings target for all state buildings managed by the Department or another department or agency with a goal shall be to attain a 10% reduction in energy use by December 31, 2008 and a 20% reduction in grid-based energy use compared to energy use and energy purchases for the state fiscal year ending September 30, 2002.</p> <p>On or before December 31, 2006, the Department shall implement Energy Conservation Measures and specific energy efficiency measures.</p> <p>The Department shall adopt policies and procedures to ensure that all new construction and major renovation of projects, shall be accomplished consistent with LEED guidelines and standards, and shall score a minimum of 26 on the United States Green Building Council, which is the minimum score required for LEED-certified status. The policies shall apply to state-leased facilities to the extent feasible.</p> <p>http://www.michigan.gov/gov/0,1607,7-168-21975_22515-116177--,00.html</p>
New Jersey	E.O.	<p>Gov. James McGreevey signed Executive Order #24 in July 2002. The Order states that all new school designs shall be consistent with the United States Green Building Council known as "Leadership in Energy & Environmental Design ("LEED"), Version 2.2 environmental sustainability in the design of schools.</p> <p>http://www.state.nj.us/infobank/circular/eom24.htm</p>
New Mexico	E.O.	<p>On January 16, 2006, Governor Bill Richardson signed Executive Order #06-001 requiring all public buildings to conform to the order further mandates that all other new construction, renovations, repairs, and replacements of state building shall follow best building practices to the maximum extent possible.</p> <p>http://www.governor.state.nm.us/orders/2006/EO_2006_001.pdf</p>
New York	E.O.	<p>Gov. George Pataki issued an Executive Order in June 2001 encouraging state agencies to be more energy efficient. The Order states:</p> <p>State agencies and other affected entities shall implement energy efficiency practices with respect to the operation, lease, or operation...State agencies and other affected entities shall strive to meet the ENERGY STAR building criteria and improve environmental quality in their existing buildings to the maximum extent practicable.</p> <p>In the design, construction, operation and maintenance of new buildings, state agencies and other affected agencies shall follow guidelines for the construction of "green buildings," including guidelines set forth in Tax Law 19, which creates the United States Green Building Council's LEED rating system.</p> <p>http://www.nyserda.org/programs/exorder111orig.asp</p>
Rhode Island	E.O.	<p>Gov. Donald Carcieri signed Executive Order 05-14 on August 22, 2005. The Order sets Energy and Environmental Design ("LEED") standards for new construction and LEED for existing buildings within 6 months. Any project that requests LEED certification shall be supported by the Department of Administration.</p> <p>The design, construction, operation and maintenance of any new, substantially expanded, or renovated public building shall be developed by the United States Green Building Council's Leadership in Energy & Environmental Design ("LEED"). Each such public building shall endeavor to qualify for certification at or above LEED Silver level.</p> <p>The design, construction, operation and maintenance of any new, substantially expanded, or renovated public building shall be based on measures on the basis of their total life-cycle costs of installation, operation, and maintenance.</p> <p>http://www.dsireusa.org/documents/Incentives/RI12R.htm</p>
Wisconsin	E.O.	<p>On April 11, 2006, Governor Jim Doyle signed Executive Order 145 which directs the Department of Administration to support LEED certification for new construction and LEED for existing buildings within 6 months. Any project that requests LEED certification shall be supported by the Department of Administration.</p> <p>http://www.wisgov.state.wi.us/journal_media_detail.asp?locid=19&prid=1907</p>

Examples of Local Green Building Laws

Executive Orders

- Salt Lake City, UT
http://www.aia.org/static/state_local_resources/adv_sustainability/executive%20orders/SLC_exec_order.pdf
- San Francisco, CA http://www.sfgov.org/site/mayor_page.asp?id=33883

Government Buildings

- Houston, TX <http://www.houstontx.gov/buildingservices/leed.html>
- Kansas City, MO
<http://cityclerk.kcmo.org/liveweb/Documents/Document.aspx?q=vtCWK6bWyxOYmfBQArvKbLN%2f13%2b431CKxJO18YIux06oHPCnVwOANG7IP%2b00KUuA>
- New York, NY <http://www.nyc.gov/html/ddc/html/ddcgreen/>

Sample Legislative Language

- Energy-Efficient Building Codes—Illinois
http://www.aia.org/static/state_local_resources/adv_sustainability/Permitting%20and%20codes/energy_efficient_code.pdf
- Energy Savings Performance Contracts
http://www.aia.org/static/state_local_resources/adv_sustainability/Permitting%20and%20codes/performance_contracts.pdf
- Green Building Tax Credit
http://www.aia.org/static/state_local_resources/adv_sustainability/Tax%20incentives/Tax_Credit_Act.pdf

Sample Incentive Programs

- American Council for an Energy-Efficient Economy Tax Credit Fact Sheet
http://www.aia.org/static/state_local_resources/adv_sustainability/Tax%20incentives/ACEEE_tax_credit_fact_sheet.pdf
- Green Building Tax Incentive Programs Overview
http://www.aia.org/static/state_local_resources/adv_sustainability/Tax%20incentives/ACEEE_tax_credit_fact_sheet.pdf
- Sample Municipal and State Tax Incentive Programs
http://www.aia.org/static/state_local_resources/adv_sustainability/Tax%20incentives/sample_tax_incentives.pdf
- Chicago, IL, Green Permitting Program
http://www.aia.org/static/state_local_resources/adv_sustainability/Permitting%20and%20codes/GreenPermitBrochure.pdf
 - Article on Chicago Green Permit Program
http://www.aia.org/static/state_local_resources/adv_sustainability/Permitting%20and%20codes/Chicago_Permit_article.pdf
- Miami-Dade Ordinance on Expedited Permitting
http://www.aia.org/static/state_local_resources/adv_sustainability/Model%20Language/Miami_Dade_ordinance.pdf
- San Francisco Expedited Permitting Program
http://www.aia.org/static/state_local_resources/adv_sustainability/Permitting%20and%20codes/SF_permits.pdf
- Comprehensive Commercial Retrofit Program Overview
http://www.aia.org/static/state_local_resources/adv_sustainability/Permitting%20and%20codes/SF_permits.pdf

- Seattle, WA—Commercial Incentive Programs
<http://www.seattle.gov/dpd/GreenBuilding/Commercial/IncentivesAssistance/default.asp>

Green Building Ordinances

- Atlanta, GA (Chapter 75—Sustainable Development)
<http://www.municode.com/resources/gateway.asp?pid=10376&sid=10>
- Gainesville, FL (Chapter 6, Article 1.5)
http://www.aia.org/static/state_local_resources/adv_sustainability/Model%20Language/Gainsville_ordinance.pdf
- Long Beach, CA
http://www.aia.org/static/state_local_resources/adv_sustainability/Model%20Language/Gainsville_ordinance.pdf
- New York City Green Building Ordinance
http://www.aia.org/static/state_local_resources/adv_sustainability/Model%20Language/NYC_green_building_ordinance.pdf
- Portland, OR <http://www.portlandonline.com/osd/index.cfm?c=41701>
- Santa Monica, CA <http://greenbuildings.santa-monica.org/>
 - Green Building Ordinance <http://greenbuildings.santa-monica.org/whatsnew/green-building-ordinance/green-building-Ord-1-5-2002.pdf>