

Green Building Incentives That Work: A Look at How Local Governments Are Incentivizing Green Development

Submitted by: Yudelson Associates



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Green Building Incentives That Work: A Look at How Local Governments Are Incentivizing Green Development

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Research Foundation**

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The National Association of Industrial and Office Properties is the nation's leading trade association for developers, owners, investors and other professionals in industrial, office and mixed-use real estate. Founded in 1967, NAIOP comprises more than 16,500 members in 55 North American chapters and provides networking opportunities, educational programs, research on trends and innovations and strong legislative representation. For more information, visit www.naiop.org.

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The NAIOP Research Foundation was established in 2000 as a 501(c)(3) organization to support the work of individuals and organizations engaged in real estate development, investment and operations. The Foundation's core purpose is to provide these individuals and organizations with the highest level of research information on how real properties, especially office, industrial and mixed-use properties, impact and benefit communities throughout North America. Funding for the Research Foundation's activities comes from the generous support of the Governors, annual gifts from NAIOP members, and underwriting from the National Association of Industrial and Office Properties (NAIOP). For more information, visit www.naiopr.org.

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Disclaimer: Due to the fast-changing sustainability environment, references current as of October 2007 are subject to change in the future.

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Executive Summary

The NAIOP Research Foundation retained Yudelson Associates in the summer of 2007 to investigate local government incentive programs, specifically for green buildings. Through an extensive literature review, Yudelson Associates identified and characterized local and state incentives for green building construction by the private sector. Additionally, Yudelson Associates conducted three separate online surveys of developers, architects and local government officials, with email and telephone interviews used to supplement survey results.

The main categories of green building incentives we found were:

1. Priority in building permit processing and plan review, sometimes with a requirement for posting a bond to guarantee the result.
2. Tax incentives, particularly property tax abatements, for projects achieving LEED Silver or better certification.
3. Increased Floor-to-Area (FAR) ratios, which allow a developer to construct more building area than allowed by applicable zoning.

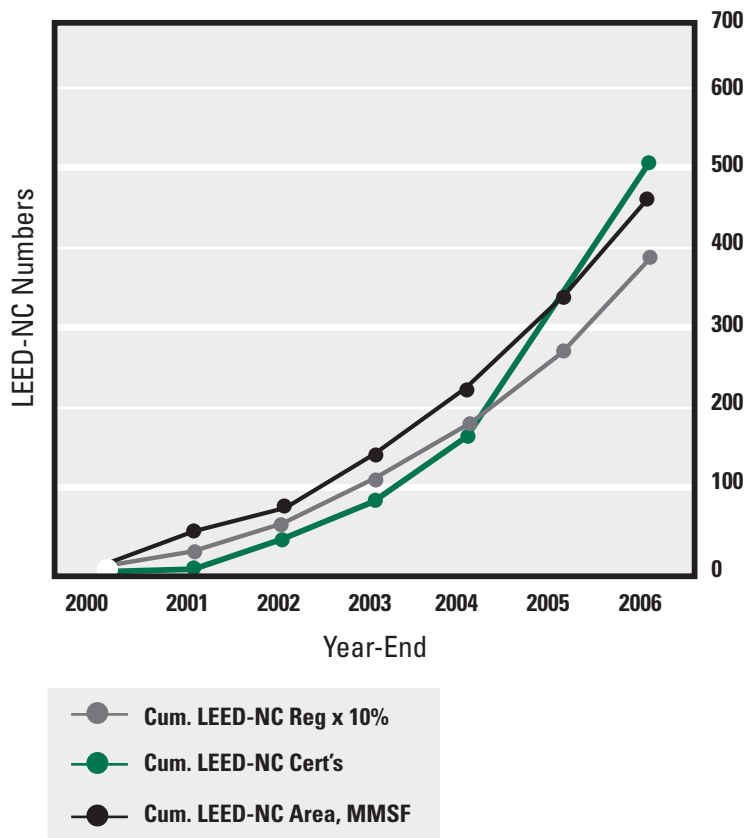
There are literally hundreds of different incentive programs for green buildings. Developers need to research what each local jurisdiction offers and make sure that they are “at the table” when such incentives are being discussed and adopted. Our surveys revealed that developers are aware of these incentives, but don’t always use them. One reason is that the timing of development decisions and the response time of local government don’t always mesh together. In a nutshell, developers need to make quick decisions, and governments prefer to move more slowly to observe “due process.”

Finally, we recommend that developers take this list of incentives and use it to proactively lobby local governments with their preferred incentives when the subject of green buildings appears on the local agenda. Often, the experience of other government agencies is very persuasive to local jurisdictions wanting to take immediate action.

Introduction

The green building movement continues to grow at a rapid rate. In 2006, the U.S. Green Building Council's (USGBC) LEED green building rating system recorded a 50 percent increase in cumulative LEED-registered projects (those intending future certification) and nearly a 70 percent increase in LEED-certified projects (Figure 1). As of November 2007, more than 8,000 projects representing more than 1.5 billion square feet of space had registered under the LEED system and more than 1,100 projects had received certification.¹

Figure 1. LEED for New Construction Registered/Certified Project Growth, 2000-2006



¹ U.S. Green Building Council, unpublished data furnished to the author.

The Local Government Response

As of July 2007, more than 600 U.S. Mayors had signed the *U.S. Conference of Mayors' Climate Protection Agreement*, committing their cities by 2012 to reduce greenhouse gas emissions by seven percent compared with 1990 levels.² This level of local government involvement presages a rapid growth in green building incentives and regulations in the next few years.

Additionally, cities and counties are becoming the "celebrities" amongst the band of actors on the green building stage. With a lack of substantial federal and state green building legislation, locally-based, market-driven incentives are sprouting up in municipalities across the country. For example, in July of 2007, Howard County, Maryland passed Bill 47-2008 which included expedited permitting for projects aiming for LEED Gold or Platinum and granted a five-year property tax credit for projects obtaining LEED-NC and LEED-CS certification. About ten cities have already adopted municipal ordinances and regulations requiring the private sector to certify all future projects above a certain size, including such large cities as Boston and Washington, DC, with timetables ranging from the end of 2007 out to 2012.³

Most municipal actions represent *market-driven incentives*, but they are by no means the only types of incentives in practice. Each city and county seems to tailor the incentive process to fit best with their particular needs. Thus, the array of means supporting green building is growing monthly as more municipalities take action. There is certainly a wealth of knowledge and experience from which other cities may gain. Our research sought to uncover the scope of green building incentives being offered across local governments in the U.S. and to assess what optimal mix of economic and procedural incentives may further green building goals in other municipalities, while assisting developers who want to "build green."

² U.S. Conference of Mayors, http://usmayors.org/climateprotection/climateagreement_071307.pdf, accessed September 15, 2007.

³ U.S. Green Building Council, <https://www.usgbc.org/ShowFile.aspx?DocumentID=691>, accessed September 15, 2007.

Representative Case Studies

Just about every jurisdiction offering green building programs also has policies and programs that go with the incentives. A developer should take the time to become familiar with the full range of potential benefits offered by the city or county. Very often, city staffs are quite knowledgeable not only about their programs, but about green building design and construction as well.

Arlington County, VA

Started in 1999, Arlington County has a very prolific Green Building program including a green building density bonus program. Through this program, a builder may request a slightly larger building than is normally allowed by the County Code if the project gains official LEED certification at any of the four levels. The amount of extra space depends on the award level and other project specifics. This density incentive applies to all types of development, not solely commercial office projects. Please see <http://www.arlingtonva.us/departments/EnvironmentalServices/epo/EnvironmentalServicesEpoIncentiveProgram.aspx> for further details.

Arlington County is also known for its Green Building Fund. In 2003, all developers must contribute \$0.03 per square foot to the fund (this is equivalent to the cost of LEED certification for most projects.) Projects that achieve at least a basic LEED certification from the USGBC receive a refund of their contribution. The Green Building Fund is then used to provide educational and technical assistance to the community and developers.

Arlington County's Green Building Program is still growing and, most recently, they are touting a Green Home and Remodeling Resource Directory to spotlight green builders.

Chicago, IL

The City of Chicago encourages builders to build sustainably in a variety of ways. For one, Chicago's Department of Construction and Permits (DCAP) touts a Green Permit Program which offers expedited permit processing. Projects accepted into the Program can receive their permits in as few as 15 business days depending on the complexity of the project. Projects which go above and

beyond the bare minimum of LEED certification may also qualify for waiver of plan review fees.

Chicago also is giving \$5,000 in grants and offers density bonuses to small businesses that include green roofs in their building design. Furthermore, Chicago has participated in Green Building pilot projects which essentially test the waters for developers and make building sustainably less risky. Finally, Chicago has a comprehensive *Green Building Education and Awareness Program* that highlights the work of green builders and seeks to drive demand for their product. For more information, please see http://www.aia.org/static/state_local_resources/adv_sustainability/Permitting%20and%20codes/GreenPermitBrochure.pdf.

San Diego County, CA

San Diego County's Green Building program offers various incentives to commercial green building projects. For example, a builder can obtain expedited plan checks saving approximately 7 to 10 days on a project's timeline. Developers may also qualify for a 7.5% reduction in plan check and building permit fees for projects meeting program requirements. (Note that these incentives only apply to projects in unincorporated areas of the County.) At least one of the following measures must be implemented to qualify for the incentives:

1. Natural Resource Conservation
 - **Recycled content materials.** (a) Show that 20% or more of the primary materials being used in the building system contain 20% or more post-consumer recycled content. Any reused materials will be found to satisfy the 20% post-consumer recycled content requirement; or, (b) Show that at least one primary building material (such as roofing) is 50% or more post-consumer recycled content. (This can be fairly easy to do for projects pursuing LEED certification, since the documentation is required for LEED purposes).
2. Water Conservation
 - **Graywater Systems.** The installation of a graywater system will qualify for the incentives. Graywater is the wastewater produced from bathtubs, showers and clothes washers. In order to conserve water, it can be used for irrigation through subsurface

distribution systems. A permit is required from the County Department of Environmental Health for the graywater system.

3. Energy Efficiency

- **Energy Use Below State Energy Code Standards.** Residential projects must exceed the minimum California state "Title 24" standards by 15%, and commercial projects must exceed the standards by 25% qualify for the Green Building Incentive Program.

Please see <http://www.sdcounty.ca.gov/dplu/greenbuildings.html> for further details. San Diego's Regional Energy Office is active in offering training, design assistance and technical support for public and private-sector green building projects.

Seattle

Seattle has a variety of green building incentives. First and foremost is Seattle's density bonus incentive. A project must achieve LEED Silver to be eligible for the greater FAR and density bonus. However, if the applicant for this bonus fails to deliver a timely report specified by the city, a \$500/day penalty will be assessed. For more information, please visit: http://www.seattle.gov/dpd/stellent/groups/pan/@pan/@sustainablebldg/document.s/web_informational/dpdp_018423.pdf. Seattle partners with its commercial and industrial developers on water issues as well. The *Water Smart Technology* Program offers financial assistance to qualified water conservation projects for technical research and installation making water conservation a financially feasible venture. For further information: (http://www.seattle.gov/util/Services/Water/For_Commercial_Customers/WATERCONS_200311261707523.asp). Lastly, Seattle's Lighting Design Lab offers free design and technical assistance to projects, especially daylighting modeling. (http://www.seattle.gov/util/Services/Water/For_Commercial_Customers/WATERCONS_200311261707523.asp).

Portland

Portland touts a Green Investment Fund which offers grants up to \$225,000 to commercial, industrial, residential and mixed-used public and private entities. However, this program is very competitive so developers may not get much use out of it. For more information, please see: <http://www.portlandonline.com/osd/index.cfm?c=42134>.

State of Oregon

Oregon provides a Sustainable Building Tax Credit for buildings achieving Silver, Gold or Platinum LEED certification. Credit is calculated based on the gross square footage of all conditioned spaces. For a large LEED Gold project, the credit might be worth \$1.50 per sq.ft. off state taxes. The Oregon 35% five-year Oregon Business Energy Tax Credit is also available to projects that fulfill certain energy conservation, equipment efficiency and renewable energy systems requirements. A pass-through option is also available for businesses that choose to pass their tax credit onto a partner in exchange for an equivalent cash payment. For preliminary information about the Oregon tax credit, please visit: <http://www.oregon.gov/ENERGY/CONS/BUS/docs/betcbro.pdf>. Oregon is also home to the Oregon Energy Trust's *Business Energy Solutions Program* which assists businesses in identifying energy savings in existing buildings and in new buildings. Financial incentives and technical support are available for such measures as energy modeling, design assistance and installing high-efficiency HVAC equipment. Please see the Energy Trust's website for further details: <http://www.energytrust.org/newbuildingefficiency/index.html>.

New York State

The New York State Energy Research and Development Authority (NYSERDA) provides computer modeling, design charrette coordination, assistance in obtaining LEED® certification, Executive Order 111 assistance, New York State Green Buildings Tax Credit assistance (for further information: <http://www.dec.ny.gov/regs/4475.html#17897>), green materials recommendations, commissioning and life cycle costing analysis to building design teams to help make new and rehabilitated commercial, industrial and institutional buildings green. Green Building services are offered under the New Construction program PON 1155. Energy-efficiency services to new building construction and renovations are offered under the New Construction Program on a first-come first-serve basis. Capital cost incentives are calculated using energy performance and technical assistance is provided on a cost-shared basis. Since 1999, NYSERDA has given more than \$92 million in federal and state funds to provide assistance for projects affecting more than 137 million square feet of building space in New York State.

Cincinnati, Ohio

On May 9, 2007, the City of Cincinnati amended legislation that established and defined The City of Cincinnati Community Reinvestment Area, adding an automatic 100% property tax exemption for developments that meet a minimum of LEED Certified for newly constructed or rehabilitated commercial or residential buildings. For buildings that meet LEED Certified, Silver and Gold, the maximum amount of abatement per dwelling unit is \$500,000 over 15 years for new construction or over 10 years for renovation/remodel. There is no maximum for LEED Platinum. For details, see: <http://www.usgbc.org/ShowFile.aspx?DocumentID=1974>.

Survey Approach

We started with a literature search of available information on green building incentives offered by state and local government. Most of the information comes from four sources: the USGBC web site, which attempts to keep up with all government programs and incentives favoring green buildings; the Directory of State Incentives for Renewable Energy⁴; NAIOP's Stateside Associates' iStateLink portal; and the general green building literature available on the Web. Our approach was then to categorize incentives in terms that made sense for developers.

We decided to take advantage of a previous NAIOP survey and include developers who had responded to that survey in this new survey. Additionally, we used Yudelson Associates' database of government officials, architects and developers (this list is biased toward the western U.S., since that is where most of Yudelson Associates' contacts are located.) We administered a 20-question survey using the Survey Monkey website.⁵ Following the initial survey requests via email, we also used the reminder tool in Survey Monkey to follow up with people who hadn't responded by the original deadline. Additionally, we followed up selected interviews with some of the people who indicated they would be willing to talk with us, either in person or via email.

⁴ Available at www.dsireusa.org.

⁵ Survey Monkey, www.surveymonkey.com.

Survey Respondents

The numbers of survey respondents were as follows. Percentages are shown in the table below and a summary of survey results by respondent type can be found on pages 13-15 and in the appendix at pages 24-30.

Developers:	53
Architects:	37
Local Government:	22
Total:	112

Survey	# Responses/ Total Sent	% Responses/ Total Sent
Developers	53/295	18%
Architects	37/201	18%
Municipal Government Officials	22/47	47%

Local government had the highest percentage of respondents. Most of those surveyed are highly motivated to promote green buildings. Responses just short of 20 percent by developers and architects can be seen as positive, since this was an online survey, and response rates are typically low for such polls. Please refer to pages 13-15 for a summary of survey results by respondent type.

Characteristics of survey respondents. Of the total number of survey respondents, 48 percent had experience in five or more green building projects, 95 percent were members of the USGBC, 75 percent were LEED Accredited Professionals and 78 percent had personally participated in a LEED-registered project. By these numbers, this group of respondents is very experienced with green buildings. In terms of geographic location of projects, 60 percent were in the West or Southwest, and only five percent represented Canadian projects. Finally, 45 percent had developed or worked in a location that offered green building incentives.

In terms of green building achievements, 69 percent of respondents had secured a LEED Gold or Platinum designation for at least one project. However, 28 percent thought that green buildings carried a four percent or more cost premium. One developer surveyed stated, "There are definitely added costs to doing green - even at two to four percent, in a competitive market with

outrageously high construction costs, it can be a barrier. Also, developers face many risks in getting a project completed. It's natural that they would want to streamline their process by working with the same team over and over. If that developer's team doesn't know how to build green, he/she will need a carrot to mentally get over the hurdle that it will take to decide to do green, because it WILL add time, confusion and cost the first time you do it (especially if it's a LEED project, and not just something green-washed). If a city offers priority permitting and \$15-20k of incentives that will likely be enough to get the developer to take the leap." This was not a lone voice amongst those surveyed. When asked why local incentive may or may not help build local green building momentum, another developer stated that "it would help pay for some of the added costs of the building."

Additionally, 48 percent thought that *perceived* cost increases were still the biggest barriers to building more green buildings. One developer said, "I believe that our perception is built on reality. The cost of third party testing and certification is a significant part of it. Certified lumber is also a potential big cost item since there are so few sources and availability and cost will be affected." Furthermore, 40 percent thought they had NOT received an adequate amount of publicity or new business for the decision to build green. Developers and architects both expressed interest in "increasing visibility."

Findings

Incentives. From the survey, the following incentives were offered by various local governments, listed in descending order of frequency. (Answers below the five percent level of frequency are not listed).

Types of Local Incentives	Percent Offering
Incentive payment from a utility energy-efficiency program	57%
Direct monetary payment from a city or county (grant, rebate or reimbursement)	52%
Expedited permit processing	36%
Marketing/publicity/awards	35%
State income tax credit	29%
Property or sales tax rebates or abatements	22%
Density bonus	21%
Access loans/loan funds	17%
Full or partial refunds for development fees	9%

Interestingly, more than half the incentives involved direct payments, either from utilities or local governments. About one-third of the agencies offered some “intangible” but still valuable incentive such as expedited permit processing or assistance with publicizing the project. Less than a quarter of agencies offered tax incentives or density bonuses, and less than ten percent offered fee reductions.

Looked at another way, of the nine most frequent incentives for green buildings, energy efficiency and renewable energy, two-thirds represent some form of monetary inducement. This suggests that local and state governments view money as the major issue for encouraging developers to “go green,” based likely on the perception that green buildings cost more and need to be incentivized with funds to lower costs. One government official put it this way, “When it comes down to it, it is about money. Would we not build ALL green IF we had the money for it?”

The survey also suggests that local governments may be missing a bet in not using such non-monetary incentives as expedited permit processing, density bonuses and assistance with marketing and publicity via awards and

other forms of recognition. For instance, one surveyed architect states, “What I observed in a group full of developers...they appeared to not care about green building, but faster permitting caught their attention.” In some areas, this change is already happening. For example, one county official stated in an interview “The County has already been approached to enter into partnerships to facilitate the timely delivery of entitlements and associated permits for green projects which we may follow up on.”

In probing what additional development incentives would make a difference to developers, the highest number of responses was for these four methods:

Expedited permit processing	13%
Tax reductions	13%
Density bonuses	12%
Expedited plan review	10%

The conclusion: money is important (in the form of tax reductions), but equally or more important are faster time to market, more certainty in the development approval process and additional flexibility to add more space if market conditions warrant.

Are local government incentives necessary to accelerate the growth of green buildings? In our survey, 62 percent said yes. Interestingly, 70 percent of responding local agencies required LEED certification for their own projects. This follows a general pattern: first cities do their own projects; then, with that experience they begin pushing the private sector to respond, typically with both non-monetary and monetary incentives. So far, most local jurisdictions have not made LEED certification mandatory, preferring the carrot to the stick. This could be working as one developer states “We are seeing in the last 12 to 18 months a significant amount of interest from many who were previously unconcerned. We are receiving RFP’s from major corporations who want a commitment to LEED from their developer.”

Two major classes of discoveries resulted from the study. The first was that there is a wide range of green building incentives in municipalities - priority permit processing, expedited plan reviews, loan funds, direct grants and tax credits to name a few. In Appendix A, we delineate the incentives we found and which jurisdictions offer them,

to aid developers, architects and government officials in understanding where efforts have been made and where opportunities exist.

The second finding related to the attitudes and wants of developers, architects, and municipal government officials with respect to green building incentives. In general, these groups were practical and business-oriented yet still optimistic for the goal of achieving sustainability in the built environment. One surveyed developer stated, "The incentives will stimulate enough activity to create the necessary infrastructure to bring the costs down." Developers were concerned with the financial feasibility of whatever incentives were proposed. Another developer revealed, "A proactive city that supports sustainability and streamlines the process would really help. *Time is money* for developers/owners/contractors." Additionally, developers were interested in the involvement of public stakeholders to gain buy-in, as well as what could be done to increase overall demand for green building. Another surveyed developer states, "Local examples, expertise and incentives seem more accessible and less strange when neighbors are involved."

What Developers Think. From the surveys, we have culled some of the most interesting and representative comments made by the developers who responded to the survey.

1. Survey Question: Which is the most significant barrier at this time to the rapid growth of green buildings?

The most significant barrier to the rapid growth of green buildings is perceived cost increase (41%). In developers' opinions, the second highest barrier is the lack of knowledge of how to build green (18%).

2. Survey Question: From your knowledge or direct experience, what two cities or counties (include state) do you think have the most successful green building incentives in place?

The most successful green building incentives are in Chicago (13%) and Portland, Oregon (9%).

Chicago:

- Priority permitting (i.e. Green Permit Program)
- WasteCap's Construction and Demolition Debris Recycling Training And Accreditation Program, for details see the City's Department of the Environment web site, www.cityofchicago.org/environment
- Green Roof Initiative
- Awards/Publicity (e.g. GreenWorks Award, Landscape Awards)

Portland:

- Publicity/Marketing (e.g. Build It Green! Home Tour)
- Free Technical Assistance (e.g. case studies, project guidebooks, etc.)
- Green Investment Fund, a competitive grant program that offers funds to industrial, commercial, residential and mixed-use projects.
- Commercial Incentives (e.g. Sustainable Building tax credit, Business Energy tax credit, see <http://www.portlandonline.com/osd/index.cfm?a=114662&c=41676> for additional information)
- Residential Incentives (e.g. Purchase and Renovation loans, Home Repair Loans, Multi-family Weatherization Program; for additional information, please see <http://www.portlandonline.com/osd/index.cfm?a=114658&c=41591>)

3. Survey Question: In your experience, what is the most compelling approach to consider building green aside from government or client requirement?

Respondents believe that the most significant incentive or trigger that has been effective in promoting green building is an internal philosophy to build green (44%). The second most significant trigger in their opinion is when business case benefits are recognized and desired by tenants (33%).

4. Survey Question: Besides direct monetary payments (grants, rebates, tax incentives, utility payments), which Green Building Incentives were/would be the most significant for you, in your choice to develop green projects?

Incentives that developers indicated would be the most significant for them and that they would like to see implemented include:

- a. Density bonuses (83%)
- b. Expedited permit processing (75%)
- c. Development fees partially or fully refunded (58%)
- d. Marketing/Good publicity / Awards (42%)
- e. Access Loans/Loan Funds (17%)

5. Interview Question: The following conclusion was gleaned from various follow-up interviews.

Builders want to have input into the incentives that will be offered or the requirements that will be imposed upon them, which is of course not surprising.

6. Survey Question: Please give one brief reason why you think local incentives will help build momentum for green building development.

Developers are concerned foremost with the financial aspects of green building. They support incentives because incentives assist in making green building a profitable venture. "Until customers are willing to pay a premium, incentives are necessary to make green projects feasible," said one. "Anything that makes it financially desirable will help people make the decision to do it," said another.

7. Interview Question: The following conclusion was gleaned from various follow-up interviews.

Some developers believe that the perceived costs match the actual costs. They believe that the costs are substantially higher to build green. As one experienced and large California developer of mixed-use communities said, "I believe our perception cost is built on reality. The cost of third party testing and certification is a significant part of it. We are presently going through an evaluation of both LEED-H and LEED-ND to understand where we are now, and where we will need to get to in order to be LEED certified. At that time we will have a better understanding of what the cost impacts are."

8. Survey Question: In your experience, what is the most important barrier at this time to the rapid growth of green buildings?

Some developers believe that there is a lack of knowledge of how to build green and that this is a substantial barrier to gaining green building momentum. There is some buy-in with larger corporations but there is a lack of knowledge on how to implement their vision. "I think there is a need to better publicize the information on how to build green to a larger audience. Our clients, mostly multinational corporations do have 'green' as one of the items in their Corporate Social Responsibility program. However, they do need our help in translating it into a ground level application," said one commercial broker in a large international firm.

Developers want cold, hard facts. They are interested in the bottom line. "How much will it cost me?" "How much would I gain from it?" are the questions being asked. One developer states "In a competitive market with outrageously high construction costs, it [extra costs for green building] would be a barrier."

Some developers believe that higher levels of LEED certification do not justify the costs of achieving them. "We typically do high quality design, but don't worry about LEED certification, especially at the higher

levels. You really need a client who wants to achieve higher ratings for other than hard economic benefits to justify the cost," said a Midwest developer.

9. Survey Question: Please give one brief reason why you think local incentives will help build momentum for green building development.

Developers understand that the development/construction industry is reluctant to make changes. Incentives will help developers get over this resistance. They believe that incentives are necessary to enable this change. One respondent said, "I believe that there are many compelling reasons to build green but that there are still also many perceived barriers (many arising out of incomplete or missing information). Providing incentives to bring down the barriers to adopting green building techniques helps develop the 'critical mass' of reasons to motivate people to at least try this approach." A broker echoed this sentiment: "Incentives may compel developers/builders to build green when they may be 'on the fence'."

To this point, one developer said, "If that developer's team doesn't know how to build green, he/she will need a carrot to mentally get over the hurdle that it will take to decide to do green, because it will add time, confusion and cost the first time you do it (especially if it's a LEED project, and not just something green-washed). If a city offers priority permitting and \$15-20K of incentives that will likely be enough to get the developer to take the leap."

Additionally, some developers believe that incentives are necessary to increase awareness among the development community that people's values are changing and that they should respond to these changes. Said one, "Every catalyst [project] helps to bring down costs and to raise awareness of importance of reducing impact of growth on earth."

Survey Results by Type of Respondent. Each of the three types of respondents, architects, developers and local government officials has a different perspective. Here we profile their responses.

Architects

- All of the architects had green building projects underway or unplanned.
- Government agencies and colleges/universities are the two most prevalent client bases (68% and 62% respectively).
- 86% are LEED accredited.

- 59% have designed projects in a city that offers green building incentives.
- Money from a utility energy efficiency program was the most common incentive offered (79%) as compared with direct municipal monetary payment from a grant, rebate or reimbursement (57%), property or sales tax rebates or abatements (43%), or state income tax credit (50%).
- 50% worked in cities that offered publicity, marketing or awards to their client base.
- Marketing/good publicity was cited by the most architects (71%) as the most influential incentive for them to persuade their clients to build green.
- 56% believe that perceived cost increases are most significant barrier.
- Answers to what was the most significant incentive that triggered or is effective at promoting green building were varied. The highest percentage (26%) said that the client requiring it as part of their policy was the significant incentive.
- 97% believe that local incentives will build momentum in the next three years.
- 60% believe that local incentives are necessary for green building's success.

Developers

- 50% of developers received priority permit processing (50%) with direct monetary payment (grant, rebate or reimbursement) and marketing/publicity and awards both trailing at 42%.
- *Density bonuses were stated as the most significant incentive to green building.*
- 41% believe that perceived cost increases are most significant barrier.
- Three percent said that they had no green building projects underway or planned.
- Locations of development projects were spread out, with a high of 27% of developers with projects on the West Coast.
- Only three percent of developers consider themselves as very experienced with green building (over 10 projects).
- No developers believe that good public relations or marketing benefits are most compelling reasons to consider building green.
- Developers perceived that Chicago and Portland were two cities with the most successful green building incentives (30% and 22% of developers respectively).

Government Officials

- 95% had green building projects underway or planned.
- 90% work in agencies that are members of the USGBC.
- 55% are LEED accredited.
- 68% have participated in a LEED project (any level).
- 50% work for an agency that offers green building incentives.
- 78% worked in cities or counties with incentive money from a utility energy efficiency program, 67% with direct monetary payment (grant, rebate or reimbursement).
- 60% stated that marketing/publicity was one of the most significant incentives they offered; 50% stated that density bonuses were one of the most significant incentives.
- 82% stated that their green building programs had formal policy support.
- 38% stated that their municipality mainly incentivizes green building by establishing councils or working groups to develop an overall plan of action for increasing green building; 25% said that they reward and celebrate current green building activities; another 25% said that they have legislated to require compliance with a standard; and 12.5% said that they have taken no action.
- 70% of agencies require LEED or equivalent for their own projects.
- 41% perceived that public contracting requirements were a barrier in governmental green building projects.
- 50% stated that most significant barrier to rapid growth of green buildings is perceived cost increases.
- Answers to what was the most significant incentive that triggered or is effective at promoting green building were varied. The highest percentage (26%) said that the internal philosophy to build green was the most significant incentive.

Conclusions

From the findings, we identified recommendations that would optimize the adoption of green building incentives in municipalities. Actions like creating incentives that affect a developer's bottom line, and increasing community awareness to the benefits of green building in order to induce greater consumer demand are just two of the proposed recommendations that naturally stem from the survey results.

Furthermore, developers, architects and government officials made it clear what incentives they wanted to see going forward. There was a wide range of incentives in this list and a need for customization based on locality was expressed. However, the most prevalent incentives desired were expedited permitting, tax reduction, density bonuses and reduced-cost building permits. To complement these incentives, those surveyed also wanted technical support for these new mechanisms. Some expressed the desire for websites dedicated to helping developers find reliable services to implement green building details like on-site water remediation and construction site recycling.

There was little disagreement among the three types of people surveyed about the value of incentives and the need for more comprehensive green building promotional programs. If there is a difference in practice, it will always be about money. Developers are concerned with the bottom line and interested in possible offsets to their costs. Cities and counties currently have the budgets to support small incentive programs, but they are much more drawn to non-monetary incentives such as publicity and awards, faster permit processing and greater density bonuses.

All in all, there is much that can be done to promote green building at the local level – actions that are not insurmountable by any means. NAIOP hopes to help build a conduit that will bring these ideas and needs to realization.

Recommendations

1. Encourage developers to have a greater say in the incentive process. They will be more likely to buy-in to the programs and use the incentives.
2. Increase awareness in selected towns and communities of the benefits of green building so that there is a pull by political supporters of progressive local officials.
3. Continue to talk to developers in their language: business and finance. Work with other green building organizations to accumulate project cost and benefit data. Show NAIOP members hard numbers and statistics. They will be more convinced to build green.
4. Increase awareness among developers that there is a change in values within the development community and among consumers to support the rapid growth of green building construction and energy-efficient operations.
5. Start creating language for specific incentives that we know the development community wants:
 - a. Expedited permitting
 - b. Property tax reductions or abatements for significant periods of time
 - c. Density bonuses and entitlement assurances
 - d. Accelerated building permit processing (this of course works best in cities where the permit process is convoluted and slow!)



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Telephone Interviews

1. David Wick, Hines, Houston, TX
2. Roger McErland, The Irvine Company, Irvine, CA
3. Tondy Lubis, Colliers International
4. David Plotkin, Seaver Franks Architects, Tucson, AZ
5. Steve Kendrick, LPA Inc., Roseville, CA
6. Russell Perry, SmithGroup, Washington, DC
7. Anthony Bernheim, HDR Inc., San Francisco, CA
8. Mary McLeod, Austin Energy, TX
9. Stuart Cooley, City of Santa Monica, CA
10. Bill Smith, City of Tacoma, WA
11. Yves Khawam, Pima County (Tucson), AZ



Appendix 1. Local Government Programs

Local governments have increasingly instituted policies, programs and incentives in the effort to encourage sustainable building. The following are a partial list of these policies, programs and incentives. Policies are formal rules to guide decisions. Programs are systems of projects or services intended to meet public needs. Incentives are any factors (financial or non-financial) that provide a motive for a particular course of action. Wherever the text says “meet LEED or equivalent,” it means for the government’s own projects, not for private development. Information is current only through August 2007; as this is a fast-changing field, we encourage developers to monitor local and state developments through NAIOP national newsletters, conferences and other sources. For an up to date listing, go to the USGBC web site: <https://www.usgbc.org/ShowFile.aspx?DocumentID=2021>.

I. By State and City

Alabama: no cities with known green building incentives or programs at the time of writing.

Alaska: no cities with known green building incentives or programs at the time of writing.

Arizona:

- Scottsdale:
 - Has a policy to meet LEED or equivalent;
 - Has created programs to encourage green building activity;
 - Has created green building guidance documents for housing (e.g. a checklist);
 - Carries a priority permitting program.
- Phoenix
 - Has a policy to meet LEED or equivalent;
 - Offers bond funds;
 - Offers loans/loan funds;
 - Offers tech support for energy efficient retrofits for A/C and lighting;
 - Offers technical support.
- Tucson:
 - Has a policy to meet LEED or equivalent;
 - Has endorsed and encouraged LEED or equivalent.

Arkansas: no cities with known green building incentives or programs at the time of writing.

California:

- The state has created programs to encourage green building activity;
- Requires LEED Silver or better for all new state-owned buildings; we have seen this requirement also apply to leased buildings, e.g., in “Request for Lease Proposals” from developers.
- The state has created a working group to develop standards/plans;
- The state offers technical support;
- The state offers training;
- The state has green building guidance documents for its own projects, such that every building achieves LEED Silver certification, per Executive Order of the Governor; these documents are produced by the California Department of General Services; since 2003, the state has created many LEED certified buildings.
- Los Angeles:
 - Has a policy to meet LEED or equivalent;
 - Has created programs to encourage green building activity;
 - Has created green building guidance documents;
 - Has created LEED demonstration projects for its own use, including libraries, animal shelters, community centers and similar types of buildings.
- Alameda County:
 - Has a policy to meet LEED or equivalent;
 - Offers technical support;
 - Offers training for the private sector, including classes in green building;
 - Has created green building guidance documents;
 - Offers grants for certain green building activities;
 - Evaluates work through third-party certification, LEED or equivalent.
- San Mateo County:
 - Has a policy to meet LEED or equivalent;
 - Has created programs to encourage green building activity.
- San Diego County:
 - Offers training;
 - Offers reduced building permit fees/plan review fees as incentives.
- Santa Barbara County:
 - Has created a working group/tasked an agency to develop standards/plans;
 - Has created green building guidance documents;

- Offers reduced building permit fees/plan review fees as incentives.
- Berkeley:
 - Has a policy to meet LEED or equivalent;
 - Offers technical support that varies according to staff expertise and developer needs.
- Calabasas:
 - Has a policy to meet LEED or equivalent.
- Long Beach:
 - Has a policy to meet LEED or equivalent.
- Oakland
 - Has a policy to meet LEED or equivalent.
- Pasadena
 - Has a policy to meet LEED or equivalent.
- Pleasanton
 - Has a policy to meet LEED or equivalent;
 - Has created programs to encourage green building activity;
 - Offers energy-efficient rebates.
- Sacramento
 - Has a policy to meet LEED or equivalent;
 - Refunds LEED certification fees.
- San Diego
 - Offers reduced building permit fees/plan review fees as incentives.
- San Francisco
 - Has a policy to meet LEED or equivalent;
 - Carries a priority permitting program;
 - Has an expedited review incentive (non-monetary).
- San Jose
 - Has a policy to meet LEED or equivalent;
 - Has endorsed and encouraged LEED or equivalent.
- Santa Barbara
 - Offers technical support;
 - Has an expedited review incentive.
- Santa Monica:
 - Has a policy to meet LEED or equivalent;
 - Has created green building guidance documents;
 - Carries a priority permitting program;
 - Has an expedited review incentive (non-monetary) ;
 - Offers grants.
- Riverside:
 - Has an expedited review incentive.

Colorado:

- Statewide Built Green (nonprofit) Program for new homes provides technical and training support. All homes registered as Built Green are inspected on a random basis by certified raters of an independent, non-profit agency, E-Star Colorado.

- Boulder:
 - Has created programs to encourage green building activity.
- Denver:
 - Has a local green building program known as “Greenprint,” with the details accessible at www.greenprintdenver.org
- Fort Collins:
 - Has a policy to meet LEED or equivalent.

Connecticut: no cities with known green building incentives or programs at the time of writing.

Delaware: no cities with known green building incentives or programs at the time of writing.

District of Columbia/Washington D.C.:

- Has a policy to meet LEED or equivalent;
- Offers technical support;
- Carries a priority permitting program;
- Evaluates work through performance monitoring and reporting;
- By 2012, all new commercial developments over 50,000 square feet have to meet the LEED Silver standard.

Florida:

- Sarasota County:
 - Has a policy to meet LEED or equivalent;
 - Carries a priority permitting program;
 - Has an expedited review incentive;
 - Offers reduced building permit fees/plan review fees as incentives.
- Gainesville:
 - Has a policy to meet LEED or equivalent;
 - Offers training;
 - Carries a priority permitting program;
 - Has an expedited review incentive;
 - Offers marketing materials/publicity;
 - Offers reduced building permit fees/plan review fees as incentives;
 - Evaluates work through third-party certification, LEED or equivalent;
 - Evaluate work through performance monitoring and reporting.
- Miami-Dade County:
 - Has an expedited review incentive.

Georgia:

- Chatham County:
 - Program details not known.
- Atlanta:
 - Has a policy to meet LEED or equivalent.
- Tybee Island:
 - Has a policy to meet LEED or equivalent.

Hawaii:

- Honolulu:
 - Has a policy to meet LEED or equivalent.

Idaho: no cities with known green building incentives or programs at the time of writing.

Illinois:

- Cook County:
 - Has a policy to meet LEED or equivalent.
- Chicago:
 - Has a policy to meet LEED or equivalent;
 - Has created programs to encourage green building activity;
 - Operates a priority permitting program.
- Normal:
 - Has a policy to meet LEED or equivalent.

Indiana: no cities with known green building incentives or programs at the time of writing.

Iowa:

- The state has created a working group/tasked an agency to develop standards/plans.

Kansas:

- The state has a policy to meet LEED or equivalent.

Kentucky:

- The state has created programs to encourage green building activity;
- The state has created a working group/tasked an agency to develop standards/plans.

Louisiana: no cities with known green building incentives/programs in place at time of writing.

Maine: no cities with known green building incentives or programs at the time of writing.

Maryland:

- The state has a policy to meet LEED or equivalent.
- Bowie:
 - Has endorsed and encouraged LEED or equivalent.

Massachusetts:

- Acton:
 - Offers density bonuses as incentives.
- Arlington:
 - Has a policy to meet LEED or equivalent.
- Boston:
 - Has a policy to meet LEED or equivalent;
 - All new commercial development required to meet LEED or equivalent standards.

Michigan:

- Grand Rapids:
 - Has a policy to meet LEED or equivalent.

Minnesota: no cities with known green building incentives or programs at the time of writing.

Mississippi: no cities with known green building incentives or programs at the time of writing.

Missouri:

- Kansas City:
 - Has created demonstration projects.

Montana: no cities with known green building incentives or programs at the time of writing.

Nebraska:

- Omaha:
 - Has a policy to meet LEED or equivalent.

Nevada:

- The state has a policy to meet LEED or equivalent;
- The state has created demonstration projects;
- AB621 (2007) preserves former substantial property tax breaks (25% to 35%) for up to 10 years for LEED Silver or better projects. The breaks do not apply to property taxes owed to local school districts. Additionally, the bill eliminates sales tax exemptions on construction materials provided by the previous 2005 law.

New Hampshire: no cities with known green building incentives or programs at the time of writing.

New Jersey:

- Cranford:
 - Has a policy to meet LEED or equivalent;
 - Fields incentive requests from developers; incentives negotiable.
- Princeton:
 - Has endorsed and encouraged LEED or equivalent.

New Mexico:

- Albuquerque:
 - Has a policy to meet LEED or equivalent.

New York:

- The state has a policy to meet LEED or equivalent.
- Suffolk County:
 - Has a policy to meet LEED or equivalent.
- New York City:
 - Has a policy to meet LEED or equivalent.
- Babylon:
 - Requires LEED certification by end of 2007 for all new projects over 4,000 sq.ft.
 - Refunds certification fees.
- Syracuse:
 - Has a policy to meet LEED or equivalent;
 - LEED required for renovations.

North Carolina:

- Chapel Hill:
 - Has a policy to meet LEED or equivalent.

North Dakota: no cities with known green building incentives or programs at the time of writing.

Ohio:

- Cincinnati:
 - Has a policy to meet LEED or equivalent;
 - Offers grants.

Oklahoma: no cities with known green building incentives or programs at the time of writing.

Oregon:

- Eugene
 - Has a policy to meet LEED or equivalent for its own projects.
- Portland
 - Has a policy to meet LEED or equivalent for its own projects;
 - Offers grants to innovative projects, very competitive process.

Pennsylvania: no cities with known green building incentives or programs at the time of writing.

Rhode Island: no cities with known green building incentives or programs at the time of writing.

South Carolina: no cities with known green building incentives or programs at the time of writing.

South Dakota: no cities with known green building incentives or programs at the time of writing.

Tennessee: no cities with known green building incentives or programs at the time of writing.

Texas:

- Austin:
 - Has a policy to meet LEED or equivalent.
- Dallas:
 - Has a policy to meet LEED or equivalent.
- Frisco:
 - Levies fines/disciplinary action for non-compliance with LEED standards.
- Houston:
 - Has a policy to meet LEED or equivalent.
- San Antonio:
 - Offers reduced building permit fees/plan review fees as incentives.

Utah:

- Salt Lake City:
 - All new buildings since 2005 are to meet LEED Silver standard, by Executive Order of the Mayor, www.slcgreen.com

Vermont:

- The state refunds fund contributions.

Virginia:

- Arlington County:
 - Has a policy to meet LEED or equivalent;
 - Has created programs to encourage green building activity;
 - Has created green building guidance documents;
 - Operates a priority permitting program;
 - Offers marketing materials/publicity for successful LEED certified projects;
 - Refunds some development fund contributions;
 - Offers density bonuses as incentives;
 - Evaluates work through third-party certification, LEED or equivalent;
 - Evaluates work through performance monitoring and reporting.

Washington:

- King County:
 - Has a policy to meet LEED or equivalent;
 - Offers grants.
- Issaquah:
 - Offers technical support;
 - Carries a priority permitting program;
 - Has an expedited review incentive.
- Seattle:
 - Has a policy to meet LEED or equivalent;
 - Offers technical support;
 - Offers marketing materials/publicity;
 - Offers limited grants;
 - Offers density bonuses as incentives.

West Virginia: no cities with known green building incentives or programs at the time of writing.

Wisconsin:

- Madison:
 - Has a policy to meet LEED or equivalent.

Wyoming: no cities with known green building incentives or programs at the time of writing

II. By Type of Policy, Program or Evaluative Action

To assist developers in finding programs that meet their particular needs, we've organized the results above by type of program. The reason for this approach is that a developer may want to (or be asked to) serve on an advisory committee for creating a green building program in a particular jurisdiction. When the discussion turns to policies or grants or non-monetary incentives, one can then refer to the specific provisions of programs in various jurisdictions. A simple Google search under "green building incentives" and the name of the city is often all that's required to find the details of a particular policy or ordinance.

A. Policies

1. **Meet LEED or equivalent:** The state or municipality has mandated by official policy that all of their buildings must meet LEED or equivalent requirements. In some municipalities, an alternative to the LEED program may serve as a substitute.

AZ - Scottsdale

- Tucson
- Phoenix

CA - Los Angeles

- Alameda County
- San Mateo County
- Berkeley
- Calabasas
- Long Beach
- Oakland
- Pasadena
- Pleasanton
- Sacramento
- San Francisco
- San Jose
- Santa Monica

CO - Fort Collins

FL - Sarasota County

- Gainesville

GA - Atlanta

- Tybee Island

HI - Honolulu

IL - Cook County
• Chicago
• Normal

MA -Arlington
• Boston

MI - Grand Rapids

NE - Omaha

NJ - Cranford

NM -Albuquerque

NY - Suffolk County
• NYC
• Syracuse

NC - Chapel Hill

OH - Cincinnati

OR - Eugene
• Portland

TX - Austin
• Dallas
• Houston

VA - Arlington County

WA -King County
• Seattle

WI - Madison

DC - Washington D.C.

- 2. Endorse and encourage LEED or equivalent:** The municipality has a policy or policies in place that formally endorse and encourage building to a LEED or equivalent standard.

CA
• San Jose
MD
• Bowie
NJ
• Princeton
VA
• Arlington County

- 3. Create programs to encourage green building activity:** The municipality has created a formal program whereby it organizes communication among green builders, green construction material suppliers, local government staff, consumers and all other stakeholders to ensure the success of green building in the municipality. Often, specific services such as training are offered regularly.

AZ - Scottsdale

CA - Los Angeles
• San Mateo County
• Pleasanton

CO - Boulder

IL - Chicago

VA
• Arlington County

- 4. Create a working group or task an agency to develop standards or plans:** The municipality has formally provided for a green building working group through legal channels such as executive order or agency regulation.

CA- Santa Barbara

B. Programs

- 1. Technical Support:** The municipality offers support concerning building methods, building preparation, site evaluation and material selection. Technical details are disseminated to building designers and contractors who will do the actual construction and design work. Technical support may include design assistance to help create well-designed, smoothly-running building projects. Support may be in written form (e.g. handbooks, website tutorials and other technical documentation) or it may be live assistance (e.g. telephone hotline, availability of green building officials to public).

AZ
• Phoenix

CA
• Alameda County
• Berkeley
• Santa Barbara

WA

- Issaquah
- Seattle

Washington, D.C.

2. **Training:** The municipality offers training workshops, classes, seminars or on-the-job coaching for building professionals. This may include design as well as construction training.

CA

- Alameda County
- San Diego

FL

- Gainesville

GA

- Atlanta
- Tybee Island

3. **Guidance Documents:** The municipality has written documents that specifically guide developers in green building certification and compliance with local regulations.

AZ

- Scottsdale

CA

- Los Angeles
- Alameda County
- Santa Barbara
- Santa Monica

VA

- Arlington County

4. **Demonstration Projects:** The municipality has taken the first steps to demonstrate certain benefits of green building by building first. This proves to developers the feasibility of certain types of projects or green construction methods.

CA - Los Angeles

MO - Kansas City

C. Incentives

1. **Priority building permit process:** The municipality will give preference to projects meeting certain criteria for green building when passing a project through the permitting process. Green building projects will pass through the process faster, saving time and money.

CA

- San Francisco
- Santa Monica

FL

- Sarasota County
- Gainesville

IL

- Chicago

VA

- Arlington County

WA

- Issaquah
- District of Columbia
- Washington, D.C.

2. **Expedited development plan review:** The municipality gives preference to working on green building development plan reviews. Projects that commit to certain sustainable certifications or other criteria representing achievements of stated goals will be processed more quickly through the plan review phase, thus gaining a time advantage which translates into cost savings.

AZ

- Scottsdale

CA

- Santa Barbara
- San Francisco
- San Diego County
- Santa Monica
- Riverside

FL

- Miami-Dade County
- Sarasota County
- Gainesville

WA

- Issaquah

3. Solar energy permit fee credit/tax credit: Developers receive a permit fee remittance or a tax credit if solar energy is included in the developed site. Many states offer solar energy tax credits. See the Directory of State Incentives for Renewable Energy for a complete list: www.dsireusa.org.

AZ

- Tucson (permit fee credit)

CA

- San Diego County

4. Tax refund/abatement/credit: The municipality gives a tax incentive to qualifying green building projects in the form of a tax refund, tax abatement or tax credit.

AZ

- All cities (AZ House Bill 2429)

CA

- Pasadena

GA

- Chatham County

MD

- Baltimore County

NV

- All cities (AB 632)

OH

- Cincinnati

5. Bond funds: The municipality collects funds from bonds which are then offered to fund sustainable development projects.

AZ

- Phoenix

6. Loan/loan funds: The municipality offers attractive loans to sustainable development projects.

AZ

- Phoenix

CA

- Alameda

7. Rebates from utilities: Utilities partner with the municipalities to offer rebates for certain green building features. There are a huge number of such programs in the U.S. This list is just a brief sampling of such programs.

AZ

- Phoenix (Salt River Project -Earthwise)

CA

- Pasadena

PA

- Reading – Municipal Light Dept. – Business Lighting Rebate Program

MA

- All cities - National Grid (Mass Electric) – Commercial Energy Efficiency Incentive Program

8. Energy-efficient rebates: Utilities offer rebates to projects that meet certain energy-efficient criteria for mechanical systems and design.

CA

- Pleasanton
- LA: LADWP – Non-Residential Energy-Efficiency Rebate Program

9. Marketing materials/publicity: The municipality offers marketing materials and good publicity thereby increasing the visibility and community recognition of the green developer. Plaques, job site signs, press in local papers and features on local websites are all techniques used here.

AZ

- Scottsdale

FL

- Gainesville

VA

- Arlington County

WA

- Seattle

10. Development fee or fund contributions refund: The municipality requires all developers/builders to contribute to a fund. Those builders creating projects that conform to certain sustainable criteria receive their fund contributions back.

VA

- Arlington County

11. LEED certification fees refunded: The municipality gives back LEED certification fees if projects meet certain green criteria.

CA

- Sacramento

NY

- Babylon

12. Direct Grants: Money in the form of grants is given to developers for green projects.

CA- Alameda County
Santa Monica

OH - Cincinnati

OR - Portland

WA- King County
Seattle

13. Reduced development fees (e.g. building permit fees, plan review fees): The municipality allows fee reduction or no fee for green projects.

CA - San Diego County
Santa Barbara County
San Diego

FL - Sarasota County
Gainesville

TX -

- San Antonio

14. Incentives by request or negotiation: The municipality allows developers to request incentives that best fit their needs. The requests are reviewed and then granted if reasonable/feasible.

NJ

- Cranford

15. Density bonuses (higher FAR): The municipality allows a project to build at a higher density if certain green criteria are met. This allows the developer to expect more rent from the building site and increase the valuation.

MA

- Acton

NJ

- Cranford

VA

- Arlington County

WA

- Seattle

D. Evaluation

1. Performance monitoring and reporting: The municipality requires post-commissioning performance reporting.

FL

- Gainesville

VA

- Arlington County

Washington, D.C.

2. Fine or disciplinary action for non-compliance with green building requirements: The municipality in effect has created a disincentive to not build sustainably. Fines can be imposed for certain non-compliance issues.

TX

- Frisco

Appendix 2. Survey Questions (for Developers)

Green Building Incentives for Developers

Welcome!

Thank you for responding to our previous survey on green issues. In conjunction with a research project being funded by the NAIOP Research Foundation, we would greatly appreciate your opinions on green building incentives.

1. Have you developed property in a city or county that currently offers or has offered incentives for green building at the time of your project?
 Yes (goes to question 2)
 No (goes to question 5)

2. Which cities or counties (include state) offered or are offering you incentives for green development? (Fill in as many as apply.)
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____

3. What was the form of the incentives? (Check as many as apply.)
 Incentive money from a utility energy efficiency program
 Direct monetary payment (grant, rebate, or reimbursement)
 State income tax credit
 Access Loans/Loan Funds
 Marketing/Good Publicity/Awards
 Density Bonuses (Higher FAR)
 Development Fees Partially or Fully Refunded
 Priority Permit Processing
 Other (please specify) _____

4. Besides direct monetary payments (grants, rebates, tax incentives, utility payments), which Green Building Incentives were/would be the most significant for you, in your choice to develop green projects?
 Access Loans/Loan Funds
 Density Bonuses (Higher FAR)
 Development Fees Partially or Fully Refunded
 Marketing/Good Publicity/Awards
 Priority Permit Processing

5. What other incentives could be offered that would make you more likely to build and certify green development projects? (Please be as specific as possible.)

6. In your experience, which is the most important barrier at this time to the rapid growth of green buildings?

- Actual cost increases
- Perceived cost increases
- Lack of knowledge on how to build green
- Building codes/regulations
- Tenants not willing to pay a premium
- Certification costs/paperwork

7. From your knowledge or direct experience, what two cities or counties (include state) do you think have the most successful green building incentives in place?

8. In your experience, what is the most compelling approach to consider building green aside from government or client requirement?

- Business case benefits are recognized and desired by tenants
- Concern about current or future energy prices
- Costs are coming down
- It's our philosophy to build green (internally)
- Priority permit processing and other incentives
- Prior experience with green building
- Public relations/marketing benefits
- Tax and other financial incentives

9. Please give one brief reason why you think local incentives will help build momentum for green building development.

10. Which of the following best describes your current occupation or profession?

- Developer – Office Properties
- Developer – Industrial Properties
- Developer – Mixed-use Commercial/Residential
- Other (please specify) _____

11. How would you describe your experience with green buildings?

- Very experienced (more than 10 projects)
- Reasonably experienced (5-10 projects)
- Somewhat experienced (less than 5 projects)
- No projects completed (but some underway)
- Green building projects planned for this year
- No projects underway or planned
- Other (please specify) _____

Please give one brief reason why you think local incentives will help build momentum for green building development.

12. Where are you located, or where do you do most of your projects?

- US – Northeast
- US – Mid-Atlantic
- US – Southeast/South
- US – Midwest
- US – Southwest/Rockies
- US – West Coast
- Canada – Alberta
- Canada – British Columbia
- Canada - Ontario

13. If you would like to expand on your answers, may we contact you by phone or email?

- Yes, you may contact me by email _____
- Yes, you may contact me by phone _____

14. Would you like to receive the survey results?

- Yes, please email me the results.
- No, thanks.

Thank you for your responses!

Appendix 3. Detailed Survey Results

Survey Participant Characteristics

	Architects	Developers	Government	Weighted Avg
Number of survey participants	37	53	22	
Type of Properties Represented (greater than 100% as one person may be involved with various property types)				
Commercial	49%	62%	n/a	57%
Institutional	30%	n/a	100%	56%
Mixed-Use	22%	56%	n/a	42%
Residential	11%	47%	n/a	32%
Office	n/a	18%	n/a	18%
Industrial	n/a	3%	n/a	3%
Green Building Experience Level of Survey Participants				
Very experienced (more than ten projects)	38%	3%	33%	20%
Reasonably experienced (5 to 10 projects)	27%	26%	33%	28%
Somewhat experienced (less than five projects)	19%	31%	10%	23%
No projects completed (but some underway)	14%	31%	5%	20%
Green building projects planned for this year	3%	8%	14%	7%
No projects underway or planned	0%	3%	14%	4%
Are you a LEED accredited professional?				
Yes	86%	n/a	55%	75%
No	14%	n/a	45%	25%
Personally participated in LEED certified project (any level)				
Yes	84%	n/a	68%	78%
No	16%	n/a	32%	22%
Where are you located/do most of your projects?				
US - Northeast	5%	16%	5%	10%
US - Midatlantic	0%	16%	0%	8%
US - Southeast/South	11%	19%	0%	13%
US - Midwest	22%	16%	5%	16%
US - Southwest/Rockies	24%	19%	50%	27%
US - West Coast	38%	27%	41%	33%
Canada - Alberta	0%	5%	0%	3%
Canada - British Columbia	0%	3%	0%	1%
Canada - Ontario	0%	3%	0%	1%

Project Characteristics

	Architects	Developers	Government	Weighted Avg
Developed property or worked in city/county offering green building incentives?				
Yes	59%	32%	50%	45%
No	41%	68%	50%	55%
Form of Incentive				
Incentive money from a utility energy efficiency program	79%	33%	78%	57%
Direct monetary payment (grant, rebate or reimbursement)	57%	42%	67%	52%
Expedited Permit Processing	14%	50%	38%	36%
Marketing/Good Publicity/Awards	0%	42%	75%	35%
State income tax credit	50%	8%	44%	29%
Property or sales tax rebates or abatements	43%	17%	0%	22%
Density bonus	8%	17%	50%	21%
Access Loans/Loan Funds	0%	25%	25%	17%
Full or partial refunds for development fees	0%	8%	25%	9%
Credit for solar PVs	3%	0%	0%	1%
Design latitude to meet code requirements	0%	0%	5%	1%
User fee discounts	0%	0%	5%	1%
Which green building incentives were offered to your clients?				
Marketing/Publicity/Awards	50%	n/a	n/a	50%
Priority Permit Processing	44%	n/a	n/a	44%
Density Bonuses (Higher FAR)	33%	n/a	n/a	33%
Access Loans/Loan Funds	11%	n/a	n/a	11%
Development Fees partially or fully Refunded	11%	n/a	n/a	11%
What effect did building green have on initial construction cost?				
No real cost impact	0%	n/a	n/a	0%
1% to 2% cost increase	17%	n/a	n/a	17%
2% to 4% cost increase	33%	n/a	n/a	33%
>4% cost increase	28%	n/a	n/a	28%
hard or impossible to measure	22%	n/a	n/a	22%
What is the highest level of LEED that you have achieved?				
Certified	0%	n/a	n/a	0%
Silver	31%	n/a	n/a	31%
Gold	50%	n/a	n/a	50%
Platinum	19%	n/a	n/a	19%
Were/are your agency's programs established through formal policies or created on an ad-hoc basis?				
Through formal policies	n/a	n/a	82%	82%
On an ad-hoc basis	n/a	n/a	18%	18%
Has your agency required LEED or its equivalent for its own projects?				
Yes	n/a	n/a	70%	70%
No	n/a	n/a	30%	30%

Attitudes and Beliefs

	Architects	Developers	Government	Weighted Avg
Besides direct monetary payment, which green building incentives were most influential?				
Priority Permit Processing	41%	75%	30%	55%
Marketing/Good Publicity/Awards	71%	42%	60%	55%
Density Bonuses (Higher FAR)	18%	83%	50%	55%
Development Fees partially or fully Refunded	18%	58%	20%	37%
Tax Refund/Abatement	47%	0%	10%	18%
Access Loans/Loan Funds	6%	17%	10%	12%
Have you received an adequate amount of publicity and/or new business from your efforts to design green?				
Yes	60%	n/a	n/a	60%
No	40%	n/a	n/a	40%
What other influential incentives could be offered? (top 10% of answers chosen for display)				
Renewables				
Tax rebates for renewables	8%	2%	9%	5%
Development				
Density bonuses	5%	11%	23%	12%
Better Development Process				
Expedited permitting	14%	25%	32%	22%
Expedited review	14%	4%	18%	10%
Reduced Fees/Taxes				
Tax reduction	11%	17%	9%	13%
LEED Certification rebates or refunds for fees	3%	6%	9%	5%
Impact fee reduction	8%	6%	0%	5%
Reduced-cost building permits	0%	8%	9%	5%
Which is the most significant barrier at this time to the rapid growth of green buildings?				
Perceived cost increases	56%	41%	50%	48%
Lack of knowledge how to build green	12%	18%	20%	16%
Actual cost increases	15%	13%	0%	11%
Tenants not willing to pay a premium	6%	10%	15%	10%
Certification costs/paperwork	9%	10%	10%	10%
Building codes/regulations	3%	8%	5%	6%
All of the above depending on project, location, client	3%	0%	0%	1%
Inaccurate pre-design first costs due to insufficient contractor databases.	3%	0%	0%	1%
Most significant incentive or trigger that has been effective in promoting green building				
It's our philosophy to build green (internally)	14%	44%	26%	31%
Business case benefits are recognized and desired by tenants	17%	13%	5%	13%
Tax and other financial incentives	3%	8%	21%	9%
Concern about current or future energy prices	9%	10%	5%	9%
Institution or client requires it as a policy	26%	n/a	0%	8%
Government requires it as a policy	6%	n/a	21%	6%
Public relations/marketing benefits	11%	0%	11%	6%
Costs are coming down	3%	3%	5%	3%
Priority permit processing and other incentives	6%	3%	0%	3%
Prior experience with green building	6%	0%	5%	3%
Do you think that local incentives will help build momentum for green building development in the next three years?				
Yes	97%	n/a	100%	98%
No	3%	n/a	0%	2%
Do you think local government incentives are necessary for the green building industry's success?				
Yes	60%	n/a	65%	62%
No	40%	n/a	35%	38%
Were the green building programs or policies offered by your agency regarded by the public in a favorable light?				
Yes	n/a	n/a	80%	80%
Somewhat yes	n/a	n/a	20%	20%
No	n/a	n/a	0%	0%
Somewhat no	n/a	n/a	0%	0%
How would you best characterize the method in which your municipality chooses or chose to incentivize green building:				
Maintain Momentum: Take no new action, no intervention.	n/a	n/a	13%	13%
Work with the Willing: Celebrate and reward current successes.	n/a	n/a	25%	25%
Coalitions and Consensus: Establish a council or working group.	n/a	n/a	38%	38%
Legislating LEED: Require documented compliance with external standard.	n/a	n/a	25%	25%
Were contracting requirements ever a barrier to promoting green building in your government's green building projects?				
Yes	n/a	n/a	41%	41%
No	n/a	n/a	59%	59%

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NAIOP Research Foundation Funded Research

The Contribution of Office, Industrial and Retail Development and Construction on the U.S. Economy (2007)

Exploration of LEED Design Approaches for Warehouse and Distribution Centers (2007)

Developing Influencer Relationships to Accelerate Development Success (2005)

NAIOP Terms and Definitions: U.S. Office and Industrial Market (2005)

The Strategic Context of Office and Industrial Property in America: Fixed Assets in a Time of Predictable Change. (2004)

“The work of the Foundation is absolutely essential to anyone involved in industrial, office and mixed-use development. The Foundation’s projects are a blueprint for shaping the future and a road map that helps to ensure the success of the developments where we live, work and play.”

Ronald L. Rayevich, Founding Chairman
NAIOP Research Foundation

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