Green Cities, Green Jobs

CIPHER/SCOPE
1715 W. Florence Avenue
Los Angeles, CA 90047
323-789-7920 phone
323-789-7929 fax

May 2007

GREEN CITIES, GREEN JOBS

MAY 2007

PRINCIPAL AUTHORS

Joanna Lee
Angela Bowden
Jennifer Ito

CONTRIBUTING RESEARCHERS

Eduardo Jansen
Sterling Thomas

Community Institute for Policy Heuristics Education and Research
(CIPHER)

Strategic Concepts in Organizing and Policy Education
(SCOPE)

1715 W. Florence Avenue
Los Angeles, CA 90047
(323) 789-7920
www.scopela.org

ACKNOWLEDGEMENTS

This discussion paper is the product of a year of information gathering and conversations with many dedicated and knowledgeable individuals. We especially thank the members and advisors of the Los Angeles Apollo Alliance and staff from the National Apollo Alliance who generously shared their expertise and insights.

We gratefully acknowledge the UCLA Center for Community Partnerships whose support made this paper possible. We also thank the following foundations for their financial support: The California Endowment, The California Wellness Foundation, Ford Foundation, French American Charitable Trust, Marguerite Casey Foundation, McKay Foundation, New World Foundation, and Unitarian Universalist Veatch Program at Shelter Rock.

This report is dedicated to principal author and lead researcher Angela Bowden, who passed away in October 2006. Angela's inquisitive nature, thoughtful analysis, and dedication are greatly missed.

The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the views or policies of the Los Angeles Apollo Alliance.

TABLE OF CONTENTS

PREFACE

Environmental policy and economic development policy are at crossroads. Aggressive statewide climate change legislation such as AB 32, the Global Warming Solutions Act, is forcing business and government to examine their practices with the lens of reducing greenhouse gas emissions, local cities are providing incentives to encourage sustainable building practices, and community groups are calling on policymakers to improve the quality of life through healthy jobs and clean communities. Industries are looking for ways to innovate, while communities are looking for new solutions to problems of poverty and environmental racism.

The Los Angeles Apollo Alliance has been working to create an innovative solution to address these environmental and economic challenges. We have proposed that one of the first solutions is through "greening" Los Angeles' deteriorating infrastructure.

Green Cities, Green Jobs series explores how the city can become a public-sector role model by providing training and jobs for its residents while creating a clean and healthy city. It provides an encouraging overview of how the city can take hold of the mayor's call to be the "Greenest Big City in America" by starting with its own infrastructure. Through case studies and examples, we can see that a socially-just, environmentally-sustainable and economically-prosperous future is attainable.

While sustainability has typically been viewed narrowly through an environmental lens, it is important to discuss how improving economic and social factors are a critical to a healthy quality of life for all communities. This paper discusses how to implement sustainable green building policies that provide environmental, economic and social benefits.

Green Cities, Green Jobs provides a solid background on how green building policy can lead the way to a more sustainable community in Los Angeles.

Bharat Patel
Sustainability Consultant
Chair, United States Green Building Council – Los Angeles Chapter
Los Angeles Apollo Alliance Advisor

INTRODUCTION

The City of Los Angeles, under the leadership of Mayor Villaraigosa and City Council, can be a national leader in the transition to a sustainable, equitable, clean energy economy

With increased awareness of the dangers of global warming and pollution, policy makers across the nation are turning towards energy efficiency and renewable energy practices and technologies. Los Angeles faces a unique opportunity to set a national precedent for how urban cities across the country can capture investment in these technologies to develop an equitable, environmentally sustainable, and economically viable green industry.

On August 16, 2006, over five hundred residents from Los Angeles' inner-city neighborhoods and representatives from over ninety non-profit organizations, labor unions, government agencies, and businesses came together to celebrate a new partnership, the Los Angeles Apollo Alliance. The alliance brings together a broad-based constituency in support of a sustainable, equitable and clean energy economy that will create quality jobs for low-income people of color, create healthier and safer communities, and promote community participation in land use planning and economic development.

The Los Angeles Apollo Alliance proposes that the city lead the way toward a regional green economy by "greening" its deteriorating building stock. Greening existing infrastructure is also an opportunity to preserve – and make more sustainable -- older urban communities that have been neglected. Equitable public investment in urban areas means not only improving infrastructure but also improving economic opportunities, particularly for low-income inner city residents. Green building also offers the potential for large scale job creation accessible to low income and working people

Green Cities, Green Jobs was developed by researchers at CIPHER for SCOPE, the social justice organization that convened the Los Angeles Apollo Alliance. This paper draws on the preliminary research compiled through policy analysis, interviews, case studies, and a literature review. The purpose of this paper is to provide diverse stakeholders with information necessary to engage in thoughtful, creative discussion about how to target the green building industry to move towards a common goal of creating good jobs, clean energy, and healthy communities.

THE GREEN CITIES, GREEN JOBS DISCUSSION PAPER IS ORGANIZED INTO THE FOLLOWING SECTIONS:

CHAPTER I. GREEN CITIES, GREEN JOBS: CREATING A SUSTAINABLE CITY THROUGH GREEN RETROFITS AND JOBS Explores how the City of Los Angeles can create a new model of sustainability through greening that addresses the need for clean inner-city communities and good jobs, particularly for low-income residents.

CHAPTER II. GREEN CITIES: POLICY OPTIONS FOR APPLYING LOCAL SUSTAINABLE BUILDING STANDARDS provides an overview of how a city can implement local green building standards. The paper discusses LEED standards and provides case studies and recommendations on how, using ordinances, cities can implement a local green building program that encourages local job creation.

CHAPTER III. GREEN FOR GREENING: LOCAL FINANCING STRATEGIES TO GREEN MUNICIPAL BUILDINGS provides an overview of current funding sources used by the city to fund overall municipal improvements. In addition this report assesses additional sources that have potential for funding energy and water efficiency upgrades.

APPENDIX I. MUNICIPAL GREEN BUILDING ORDINANCES/RESOLUTIONS INDEX lists over 17 City or County policies, including Los Angeles,that mandate local green building.

APPENDIX II. GLOSSARY OF GREEN BUILDING TERMS

GREEN CITIES, GREEN JOBS

CHAPTER ONE

CREATING A SUSTAINABLE CITY THROUGH GREEN RETROFITS & JOBS

As energy price rise and the Mayor attempts to "Green" the city of Los Angeles, city elected and appointed officials can demonstrate leadership in energy efficiency by creating clean jobs, constructing high-performance buildings and manufacturing clean-energy technologies. One of the first steps toward become a high-performance city is to take the lead and '"green" municipally-owned and operated buildings.

This chapter describes how the city can "go green," starting with its deteriorating infrastructure. This chapter also explores how the city can create a new model of sustainability through greening that includes addressing the need for clean inner city communities and good jobs, particularly for low-income residents.

DEFINING "GREEN" RETROFITTING

A standard building retrofit is an improvement to building infrastructure, and often to operating and management practices, that reduces utility (energy and water) and maintenance costs or improves building safety. The process of retrofitting is often considered a way to "modernize" an older building's infrastructure.

Energy Efficient or Green Retrofits renovates or "modernizes" older building infrastructure using healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition. Similar to other types of building retrofits, green retrofits reduce costs and improve building safety. However "green" retrofitting, includes additional environmental, economic and social benefits. For example, greening the City's buildings will protect and extend the life of the city's municipal building stock, save the city money through energy and water efficiencies, ensure that city buildings are a safe and healthy for city workers and the community.

A "green" retrofit starts with a thorough audit to establish current costs and opportunities for savings. After the audit has determined areas for improvement, infrastructure renovations are completed. These retrofits typically include mechanical, electrical and plumbing upgrades, as well as more precise control systems and conversion to renewable energy where appropriate. Staff training and new management and monitoring strategies are necessary to maintain energy efficiency.

"Green" retrofitting includes not only upgrading infrastructure improvements in order to maximize efficiency, but also improves infrastructure in order to minimize the environmental impact of the building. Greening existing buildings through green retrofits not only ensures that the buildings are safe and well-maintained, but also ensures the buildings will be efficient and environmentally-friendly. Greening a building also extends to the types of chemicals used to clean the facility, landscaping that can conserve water and design elements that conserve building energy. Major alterations can be made to the building such as installing building materials that do not emit harmful pollutants, using renewable products, installing energy and water-saving products such as solar panels and low-flush toilets.

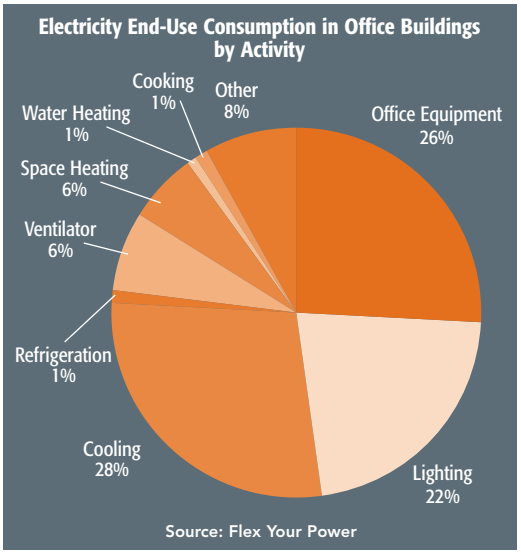
Reducing pollution caused by inefficient buildings creates a cleaner and healthier environment for residents and workers. Buildings have an enormous affect on the quality of life, particularly for urban workers and residents. While mostly considered for their function and aesthetic, buildings also have a significant affect on the environment. Residential and commercial buildings account for over one-third of U.S. energy use and carbon emissions.[1] Buildings account for 30% of greenhouse gas emission released into our air nation-wide buildings contribute 30% of green gas emissions, 36% of total energy use and 30% of waste output.[2] Commercial office buildings alone account for 18% of U.S. carbon emissions and spend $24 billion on energy, according to the Building Owners and Managers Association.[3] In addition, avoidable "sick" building affect on worker productivity costs the state of California -- $8.5B in 2000 dollars per year.[4] The combined cost of both fatal and non-fatal impact due to indoor air pollution in California homes, schools, and non-industrial workplaces is estimated at $45 billion per year. Worker performance and resident health could be significantly increased by retro-fitting buildings with cleaner, less toxic materials.

GREEN RETROFITTING REDUCES ENERGY COSTS OF INEFFICIENT BUILDINGS WHICH WASTE TAX-PAYER MONEY

Buildings are the leading energy users in America, accounting for over $280 billion in annual energy costs.[5] Green building techniques can reduce building energy costs by 20-50% and water usage by at least 50% outdoors and 30% indoors, resulting in substantial savings for the city and tax-payers.[6] Retrofits demonstrate municipal government leadership in the community and diligence in managing assets by addressing constituent demands for reduced energy use, reduced greenhouse gas emissions and environmental health and safety and a responsible use of tax dollars.

Six of the most important areas of efficiency are energy use, lighting, heating and cooling, water, landscaping and roofing. Below are potential areas of efficiency for non-residential office buildings, which comprise a large portion of Los Angeles' building stock.

ENERGY USE The largest potential for energy savings can be found in the large number of properties built before 1975 when building efficiency guidelines were implemented nationwide. Even in new buildings there remains huge untapped potential for financial savings through strategic energy management that improves efficiency and reduces costs.[7] The majority of energy use within the average office building goes to cooling (28%), lighting (22%) and office equipment (26%).[8] These numbers will vary based on the climate where the building is located. Energy efficiency measures in these three areas can reduce operating costs by more than 30 percent. In addition, for each dollar invested in energy efficiency, asset value increases by as much as three dollars.[9]



LIGHTING Between twenty-two (22%) to fifty (50%) percent of all electricity consumed in commercial office buildings is used for lighting. Lighting is a key segment of a building's energy costs and an important target for energy efficiency. Upgrades to lighting can make lighting systems 40 percent more efficient and can be integrated into routine building maintenance. Examples of lighting upgrades include: replacing old lighting with energy efficient bulbs, installing new electronic ballasts, installing occupancy sensors and increasing the use of natural sunlight.

Annual Returns on Lighting Investments

LIGHTING INVESTMENTS	ANNUAL RETURN ON INVESTMENT
Occupancy Sensors	55% – 70%
Electronic Ballasts and T-8 Lamps	25% – 35%
LED Exit Signs	30% – 40%
Replace Mercury Vapor Fixtures	20% – 25%

Source: http://www.socalgas.com

In addition to savings from upgrades to overall lighting systems, replacing fluorescent and incandescent exit signs with LED exit signs can substantially decrease energy consumption. LED Exit signs are up to 95% more efficient then older incandescent and fluorescent models.[10] Per sign, energy savings is estimated at $50 a year. Over an LED's lifetime 100 LED models save about $31,644. Additional savings also come in the form of lower maintenance costs.[11]

EXAMPLE

A commercial lighting system retrofit which includes the addition of T-8 lamps, electronic ballasts, new reflectors and occupancy sensors can cost $100,000. With projected energy savings of about $40,000 per year (800,000 kWh at $0.05/kWh), the simple payback period of this energy retrofit is 2.5 years. [12]

WATER About 88% of water used in commercial buildings is sanitary (e.g. toilets, sinks), landscaping, and heating and cooling.[13] Cost-effective water conservation measures can reduce non-residential urban water consumption by 15-50%. Examples of water conservation methods include fixing leaks and replacing urinals and toilets.[14] In addition to indoor water conservation, savings can be obtained through more efficient landscaping ranging from small measures such as replacing sprinkler heads to make sure they are spraying efficiently to replacing irrigation systems to newer and more efficient systems designed to conserve water.

EXAMPLE

A typical 100,000-square-foot office building, a 30% reduction in water usage through the installation of efficiency measures can result an annual savings of $4,393. The payback period is 2.5 years on the installed conservation and efficiency measures. In addition to providing a 40% return on investment, the measured result in an annual conservation of 975,000 gallons of water. [15]

OPERATIONS AND MAINTENANCE An effective operation and maintenance program can reduce annual utility bills by 5-20 percent without any capital investment in equipment upgrades. Maintenance activities on HVAC systems can save up to 30% of fan energy and up to 10% of space conditioning energy use.[16] Using non-VOC paints and finishes – materials that lack the toxic gases that contribute to air pollution – is especially effective in on-going maintenance. Using these products reduces exposure to indoor pollution and can be applied while employees are working – reducing the loss of productivity that would occur when applying traditional materials.[17]

HEATING AND AIR CONDITIONING Between 40-60% of a commercial building's electricity consumption is from heating and air conditioning.[18] Much of the demand is due to poor management and the use of old, inefficient heating and cooling systems. Most heating and air conditioning systems are oversized, have leaks and do not meet manufacturers specifications.[19]

There are numerous ways to make heating and air conditioning systems operate more efficiently. Adjustments and modifications to existing equipment can make systems up to 50% more efficient.[20] Upgrades and replacement of systems and ensuring that systems are operating correctly can also provide considerable savings.[21]

Annual Returns on Air Conditioning Investments

AIR CONDITIONING INVESTMENTS	ANNUAL RETURN ON INVESTMENT
High-Efficiency Air Conditioners	25% – 35%
Evaporative Coolers	25% – 35%
Energy Management System (EMS)	30% – 40%
Adjustable Speed Drives (ASDs)	30% – 40%
High-Efficiency Motors	35% – 45%

Source: http://www.socalgas.com

In addition to maintaining and upgrading heating and air conditioning systems, keeping air conditioned and heated air inside the building is a critical component of energy conservation. Conservation measures include: improved insulation, cocking around doors and windows and coving windows with thin layers of film to reduce heat from direct sunlight.

EXAMPLE

The U.S. Postal Service Retrofitted it's Reno, Nevada mail sorting facility with more efficient lamps, lowered and sloped the ceiling to improve heating and cooling and enhance indirect lighting and improved acoustics for $300,000. The annual savings was $50,000. which provided a six-year payback.[22]

LANDSCAPING Energy or water efficient landscaping, often called "xeriscape" is quality landscaping that conserves water and protects the environment. Efficient landscaping with slow-growing, drought tolerant plants conserve water and reduce the need to dispose yard trimmings. In addition, xeriscaping involves installing water efficient irrigation systems, using sustainable materials and designing areas to shade buildings and reduce cooling costs, especially during the summer. Xeriscaping will decrease the life cycle maintenance costs[23] of landscaping.[24] In general, landscaping for energy efficiency provides enough energy savings to return an initial investment in less than 8 years.[25]

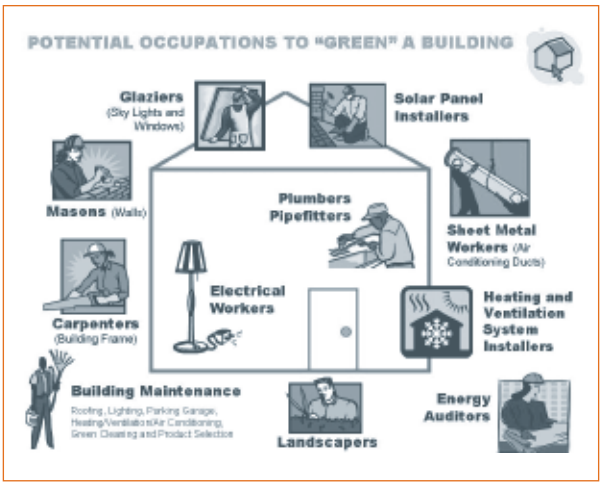
ROOFING Cool roofs are highly reflective and emissive materials that stay 50 to 60º F cooler in the summer sun, thereby reducing energy costs, improving occupant comfort, cutting maintenance costs, increasing the life cycle of the roof, and contributing to the reduction of urban heat islands and associated smog. During the summer, a typical dark roof peaks at 150 to 190º F, while cool roofs peak at 100-120º F.[26] A reflective roof can reduce peak cooling demand by 10-15% and reduce energy bills for cooling up to 50%. A reflective or "Cool" roof can also help reduce the "heat island effect," a phenomenon where cities can be two to eight degrees warmer than the surrounding countryside. Installing reflective roofs helps reduce the heat island effect, decreasing the amount of smog in the air and benefiting the entire community.[27]

EXAMPLE

A 100,000 square-foot retail store in Austin, Texas, replaced a black rubber roof membrane with a white thermoplastic alternative – a "cool roof" and is expected to achieve an annual energy savings of $7,400.[28]

GREEN RETROFITTING GENERATES JOBS, BUILDS SKILLS AND STIMULATES LOCAL ECONOMY IN THE GREEN BUILDING INDUSTRY

The demand for municipal green retrofitting can lead to the creation of high-quality, unionized jobs in this industry. Comprehensive Building Retrofits are based on innovative, complex technologies that require skills and training. Retrofitting includes a variety of skills and jobs such as window and carpet installation, heating, cooling and ventilation replacement and system management, replacing and maintaining lighting systems, solar panel installation and maintenance.



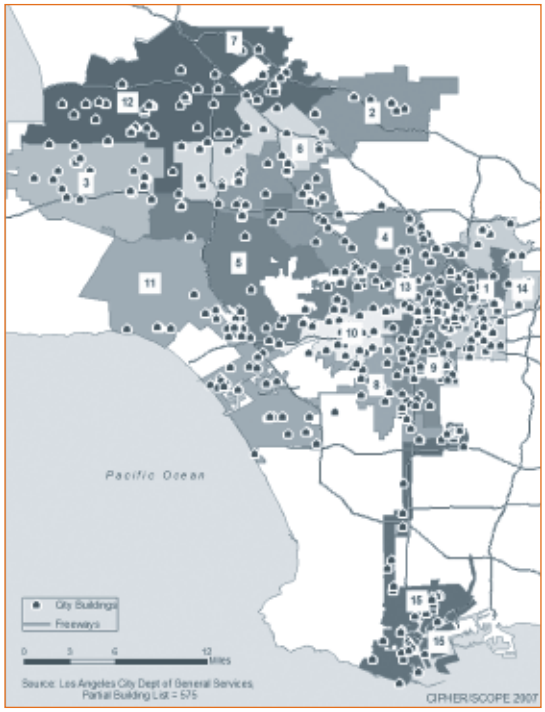
The retrofitting of city buildings provides a unique opportunity to improve urban infrastructure while helping to train a quality workforce that has the skills and expertise to construct a clean and healthy city.

Initial industry and occupational research point to the potential of creating new or upgrading existing jobs in construction, manufacturing, and maintenance/operation sectors. Jobs can be created in the retrofitting sector in the short-term and in the on-going operations/maintenance and manufacturing sector in the long-term, as the demand grows for green products and services. Public sector workers from city retrofit jobs can be transitioned into public sector maintenance jobs and private sector construction jobs.

CREATING A SUSTAINABLE LOS ANGELES THROUGH RETROFITS AND JOBS

Improving the city's deteriorating infrastructure is an important step toward creating jobs and a cleaner city. Over 1100 buildings, totaling over one million square feet, are owned and managed by the City of Los Angeles, many of which are publicly used facilities such as parks and recreation buildings, police and fire stations.[29] Years of deferred maintenance, however, has led to the deteriorated condition of Los Angeles City's municipal buildings. According to a 2003 report by Mayor James Hahn's Blue Ribbon Infrastructure Task Force on Infrastructure:

- 691 of the 842 General Service Department buildings (a $3+ billion portfolio) are in need of major capital repairs.
- The average overall grade of public buildings is a "D"[30] , with 44% of the buildings receiving a grade of D or F.
- Buildings with a "C" grade, or roughly 44% of the city's building stock, are rapidly deteriorating. The Department of General Services, according to the Task Force report, recommends municipal buildings be maintained at a level of grade B or better, with preventive maintenance schedule in place.



LA City Buildings By City Council District

The need for Improvements in municipal infrastructure is at a critical level. The deteriorated and inefficient condition of Los Angeles' municipal buildings is a threat to the city's assets, wastes energy and water, contributes to environmental pollution, threatens the health and safety of city employees and buildings users and reduces the productivity of city workers.[31]

In addition to the need for infrastructure improvements in city-owned properties, private non-residential construction is also experiencing growth[32], which creates a demand for workers. In Los Angeles, employment in the construction industry overall is projected to increase by 30% between 2002 and 2012 according to California Employment Development Department data.[33] Most of state's construction boom was being driven by a surge in multi-family residential construction, like the new rental and condominium projects in downtown Los Angeles. However, private, non-residential construction and public construction are the growth areas. In Los Angeles County, $4.2 billion was spent on public construction in 2006 and total public construction spending is expected to grow in 2007.[34]

Capital Program	Current Grade	Recommended Grade
Streets	D	B
Traffic Congestion Relief	D	C
Stormwater	D	C
Municipal Buildings	**D**	**B**
Bridges	C+	B+
Street Lighting	C	TBA
Parks	C	B

Mayor's Blue RIbbon Infrastructure Task Force on Infrastructure, 2003

The need for municipal infrastructure improvements, increase in traditional construction work and recent green building policies may also increase the demand and opportunities for an emerging green workforce. According to an Economic Roundtable's 2006 report, construction jobs account for six of the city's top 20 green technology occupations.[35] The construction occupations that can become "green" range from entry-level union jobs as apprentices in buildings and trades to high-skilled journeymen. Additionally, construction industry career ladders allow workers, who earn entry-level wages of $9-18/hour, to become advanced skilled workers such as plumbers, sheet-metal workers and electricians, earning $15-50/hour. Local union training programs are also currently working with community colleges to help train workers to enter unionized green jobs such as installing solar panels and installing efficient grey water systems.

Los Angeles is in a unique leadership position to address current infrastructure needs while training a "green" unionized, quality workforce. In Spring of 2007, the city began a city-wide audit of city buildings to identify areas for energy and water efficiency. The city must take the next step and develop quality job creation and workforce development strategies to connect unemployed and underemployed low-income urban residents to green career paths.

NOTES

1. Apollo Strategy Center. 2006. "New Energy for Cities: Energy-Saving & Job Creation Policies for Local Governments."

2. United States Green Building Council Website. Accessed August 28, 2006. Available at http://www.usgbc.org/DisplayPage.aspx?CMSPageID=291&

3.George, Evan. Local Climate Change. 2007. Downtown News. March 19.

4. Figure based on estimates determined by Shimer, Phillips, Jenkins's "Indoor Air Pollution in California: Report to the California Legislature" Access on August 28, 2006. Available at http://www.arb.ca.gov/research/indoor/ab1173/report0205/rpt0205.pdf

5. Apollo Strategy Center. Accessed March 30, 2007. Available at http://www.apolloalliance.org/strategy_center/reports_and_resources/independencefacts.cfm

6. Apollo Strategy Center. 2006. "New Energy for Cities: Energy-Saving & Job Creation Policies for Local Governments." Accessed http://www.apolloalliance.org/strategy_center/reports_and_resources/index.cfm

7. Flex Your Power. Accessed on August 28, 2006. Available at http://www.fypower.org/bpg/

8. Based on data from the Department of Energy, Energy Information Administration, Building End-Use Consumption Survey, 1999. Accessed August 28, 2006. Available at http://www.fypower.org/bpg/

9. Flex Your Power. Accessed on August 28, 2006. Available at http://www.fypower.org/bpg/module.html?b=offices&m=Funding_and_Approval&s=Selling_the_Program.

10. New Hamphire Office of Energy and Planning. Accessed on August 28, 2006. Available at http://www.staywarmnh.org/businesstips.htm

11. Flex Your Power. Accessed on August 28, 2006. Available at http://www.fypower.org/bpg/module.html?b=offices&m=Lighting&s=Signage

12. U.S. Department of Energy. "Rebuild America Guide Series: Financing Energy Efficiency in Buildings." Accessed April 22, 2007. Available at http://eber.ed.ornl.gov/commercialproducts/finance.pdf

13. Center for Sustainable Systems, University of Michigan. August 2005. "Commercial Buildings Factsheet." Accessed August, 2006. Available at http://css.snre.umich.edu/css_doc/CSS05-05.pdf

14. Toilets installed in the 1980s use an estimated 3.5 gallons per flush; if older, they may use as much as 7 gallons. Federally-mandated ultra-low flush toilets only use 1.6 gallons - saving up to 77% of water.

15. Sustainable Building Technical Manual: Green Building Design, Construction and Operations. July 30, 1996. "Chapter 1: The Economics of Green Buildings." Public Technology Inc and The U.S. Green Building Council. Accessed August 28, 2006. Available at http://smartcommunities.ncat.org/pdf/sbt.pdf

16. Flex Your Power. Accessed on August 28, 2006. Available at http://www.fypower.org/com/tools/energy_tips_results.html.

17. City of Los Angeles, Department of Engineering. April 2003. "City of Los Angeles Sustainable Building Initiative: An Action Plan for Advancing Sustainable Design Practices." Accessed January 2006. Available at http://eng.lacity.org/projects/sdip/docs/SustainableBuildingInitiativeActionPlanFinal043003.pdf

18. Proctor, Downey, Conant, and Wright. November 6, 2003. "CheckMe!® Commercial and Residential AC Tune-Up Project – Innovative Peak Load Reduction Program – Final Report." California Energy Commission.

19. California Energy Efficiency Website. HVAC PAG White Paper. Accessed August 28, 2006. Available at http://www.californiaenergyefficiency.com/pagdocs/WP_HVAC_PAG_Proctor.doc

20. Flex Your Power. Accessed on August 28, 2006. Available at http://www.fypower.org/bpg/module.html?b=offices&m=Central_HVAC_System

21. You can redesign unit and add new energy efficiency technology and new parts that were not available before 1975. A new system with redesigned ducts and flow and new efficient appliances can save over 60% energy compared to a pre-1975 system that is probably not operating up to its efficiency.

22. City of Los Angeles, Department of Engineering. April 2003. "City of Los Angeles Sustainable Building Initiative: An Action Plan for Advancing Sustainable Design Practices." Accessed January 2006. Available at http://eng.lacity.org/projects/sdip/docs/SustainableBuildingInitiativeActionPlanFinal043003.pdf

23. Life cycle cost calculates costs over the "useful" or anticipated life of an asset. From the Sustainable Building Technical Manual: Green Building Design, Construction and Operations. July 30, 1996. "Chapter 1: The Economics of Green Buildings." Public Technology Inc and The U.S. Green Building Council. Accessed August 28, 2006. Available at http://smartcommunities.ncat.org/pdf/sbt.pdf

24. Sourcebook for Green and Sustainable Building: Xeriscape. Accessed January, 2007. Available at http://www.greenbuilder.com/sourcebook/Xeriscape.html

25. U.S. Department of Energy, Energy Efficiency and Renewable Energy. Accessed January, 2007. Available at http://www.eere.energy.gov/consumer/your_home/landscaping/index.cfm/mytopic=1190

26. California Energy Commission, Consumer Energy Center. Accessed January 2007. Available at http://www.consumerenergycenter.org/coolroof/

27. Energy Star, Frequently Asked questions on Roof products. Accessed January 2007. Available at http://www.energystar.gov/index.cfm?c=roof_prods.pr_roof_faqs

28. Environmental Protection Agency. EPA: Heat Island – What Can Be done. Accessed January 2007. http://www.epa.gov/heatisland/strategies/coolroofs.html

29. Based on the City of Los Angeles General Services Department Building Database of 573 City buildings.

30. A "D" grade means that the buildings are in poor condition with significant deterioration; occupants are dissatisfied with conditions; maintenance is being deferred; no proactive or preventative program in place.

31. City of Los Angeles. December 2003. "Mayor's Blue Ribbon Task Force on Infrastructure: Findings and Recommendations."

32. Construction Industry Research Board. December 26, 2006. "California Construction Review."

33. California Employment Development Department.

34. Los Angeles Economic Development Corporation. February 2007. 2007-2008 LAEDC Economic Forecast & Industry Outlook.

35. Burns, Patrick and Daniel Flaming. 2006. "Jobs in L.A.'S Green Technology Sector." Economic Roundtable.

GREENING CITY POLICY

CHAPTER TWO

POLICY OPTIONS FOR APPLYING LOCAL SUSTAINABLE BUILDING STANDARDS

Green building provides a unique opportunity for the public sector to take the lead in stimulating the demand for green products and services. Public policy has been the main driver of developing green industries and implementing green practices across the nation. The implementation of green building standards within the City of Los Angeles is a key step towards stimulating the growth of a local green industry.

Determining which green building practices to integrate into the construction or maintenance of buildings can be a significant undertaking for city leaders and private developers because of the breadth of greening methods. For governments, greening building can be particularly complicated due the variety of municipal building sizes and types as well as the limited resources and funds. Because of the diversity of green building strategies, the United States Green Building Council created LEED (Leadership in Energy & Environmental Design), a third-party sustainable rating system, to provide a common green building evaluation system. LEED is the industry standard and assists in providing energy efficiency standards for private and public facilities. Although most cities that implement green building require the use of LEED sustainable building standards, some cities choose to adapt the criteria by using "Supplemental" LEED standards or create their own sustainable standards.

This paper provides an overview of how a city can implement local green building standards:

- Section 1 describes USGBC's LEED standards which are used by private developers, state and local governments to assist in adopting a broad range of sustainable building practices.
- Section 2 compares local strategies that municipalities have used in adapting green building standards to their specific needs.
- Section 3 provides an overview of local green building development policy
- Section 4 defines components of a successful green building jobs program which includes policies for greening as well as local hiring and purchasing.

IN BRIEF

- Local governments implement building standards by developing their own standards or by using LEED, a third-party sustainable rating system designed by the United States Green Building Council. Some cities adapted the LEED criteria by using "Supplemental" LEED standards. Some cities adopted local sustainability strategies before LEED became the industry's standards and have since added LEED into their programs.
- Cities establish the use of sustainable building practices using ordinances or resolutions, often with LEED requirements.
- Model ordinances for a green building jobs programs not only include green building practices but should also include local hiring requirements, funding mechanisms, and enforcement plans. In order to ensure a viable green industry, ensuring the growth of local jobs must be a key component of any green building program.

OVERVIEW OF LEED STANDARDS

In 1998, the United States Green Building Council (USGBC) created the Leadership in Energy & Environmental Design (LEED) Green Building Rating System to provide a third-party certified, national standard for designing, constructing, and operating high-performance, sustainable buildings.[1]

The LEED rating system measures the full environmental impact of a building, from water systems and building materials to landscaping. It measures the performance of a building across the following six categories: 1) Sustainable Sites, 2) Water Efficiency, 3) Energy and Atmosphere, 4) Materials & Resources, 5) Indoor Environmental Quality, and 6) Innovation and Design Process.

A building earns points for implementing specific sustainable design and maintenance elements in each category. According to the total number of points, a project can earn certification at Certified, Silver, Gold, or Platinum levels.

There are 6 different types of LEED rating systems: 1) new construction, 2) existing buildings, 3) homes, 4) core and shell, 5) neighborhood development, and 6) commercial interiors. There are also additional rating systems for specific markets such as retail, multiple buildings/campuses, schools, healthcare, laboratories, and lodging.

CITIES, COUNTIES AND STATES ACROSS THE COUNTRY ARE ADOPTING LEED STANDARDS TO ENCOURAGE THE USE OF ENVIRONMENTALLY-SUSTAINABLE DESIGN TO CREATE HIGH-PERFORMANCE BUILDINGS.

California is home to the most number of LEED-certified buildings in the country. In 2002, the Los Angeles City Council voted to require all new city-funded buildings to meet LEED standards. LEED-certified city buildings include fire stations, animal shelters, and libraries. The city is now considering adopting LEED silver requirements for new city construction.[2] In 2002 , the Los Angeles Community College District also used LEED standards in its $2.2-billion, nine-campus construction and renovation program–the largest LEED project in the nation. In December 2004, California's Governor mandated that all new state-funded buildings be LEED Silver-certified. In January 2007, the County of Los Angeles also adopted LEED standards for new construction.[3]

Since 1998, USGBC has revised LEED standards several times to incorporate modifications in the credit system and in the certification process. LEED v.1 was a pilot program that certified 12 buildings in its first year. In March 2000, LEED v.2 was introduced as a design and certification tool. By the end of 2000, 8 million square feet of buildings were undergoing LEED certification. In November 2002, version 2.1 was established and created more streamlined documentation processes and requirements. The USGBC introduced LEED v.2.2 in the fall of 2006 and is currently working on LEED v.3.[4]

BENEFITS OF LEED STANDARDS

- Post-construction savings can exceed additional up-front cost
- Standards complementary to urban settings
- Construction industry is increasingly familiar with standards
- Flexible, points-based menu of sustainable options
- USGBC monitors compliance
- Nationally recognized standards, adopted by many cities
- Third-party certification validates "green" efforts
- USGBC updates standards to reflect current technology and practices
- Continuous monitoring ensures building remains sustainable

CHALLENGES OF LEED STANDARDS

- Mandating similar standards across the board may not be appropriate in every instance
- Higher construction and planning costs in short-run
- LEED certification process requires additional project management

This section discusses two approaches to tailoring green building standards to city or state-specific conditions. While many cities have adjusted USGBC LEED standards to fit their local needs, other cities have created their own sustainable building standards. The following are case studies in policy approaches to localizing green building standards.

APPROACH #1 TAILORING NATIONAL LEED STANDARDS TO LOCAL CONDITIONS

Instead of simply applying national LEED standards to local building standards, the USGBC has worked with local governments to create amendments, or LEED Supplements. Supplements are used in addition to fulfilling the national LEED standards and are used by local governments to tailor LEED points to local conditions, such as climate as well as municipal codes and requirements. These supplements involve changes in point weightings, additional credits or modifications to the national LEED standards.

Portland was the first city to work with the USGBC to localize LEED standards. LEED PDX, Portland's LEED supplement, includes additional innovation credits that reflect Portland's local building goals. Seattle also made amendments to LEED by adding city landscape and ground management guidelines and by requiring additional energy points to ensure LEED-certified buildings conform to their city code.[5]

In 2001, California adopted state LEED standards (CA LEED), but they were never implemented. When the County of Los Angeles and the LA Community College District each adopted LEED standards, they added policy amendments to emphasize water conservation and renewable energy, respectively.

BENEFITS OF LEED SUPPLEMENTS

- Adding supplements to LEED allows for regional differences in sustainable practices, acknowledges current sustainable practices
- Potential to streamline compliance process: where city codes include LEED standards and vice versa, developers do not have to follow two distinct sets of guidelines
- Alleviates administrative burden. USGBC has established an entire administrative system to verify and certify buildings aiming for LEED recognition: the USGBC is responsible for checking for compliance and coordinating LEED standards with contractors
- National recognition of obtaining LEED certification
- Opportunity to insert social goals

CHALLENGES OF LEED SUPPLEMENTS

- USGBC is updating its LEED standards to LEED v.3 which will implement regionally weighted credits. As a result, localizing LEED may not be as relevant.
- Localized LEED may need to be updated by the city and USGBC regularly to make sure that the standards remain meaningful, which may be time consuming
- Coordination time with USGBC to prepare Supplement

CASE STUDY Portland's LEED PDX

In 2001, the Portland City Council passed a Green Building Policy resolution which requires the City to apply green building practices to new City construction, major city renovation, city building operations, city funded projects and infrastructure projects. The Green Building Policy was written by the Office of Sustainable Development (OSD).

Described as a cornerstone of the Green Building Policy, Portland LEED, or LEED PDX was created to incorporate Portland's erosion control, stormwater management, and energy regulations. LEED PDX, focused on new construction, also includes a series of pre-approved innovation credits that reflect Portland's goals for mixed use development, construction waste management, and alternative transportation. While the standards apply to new city construction, major city renovations, and city-funded projects, private developers may also opt to abide by LEED PDX.

Housed under the OSD, Portland's Green Building Policy Resource Center's Green Building Program, which includes LEED PDX, has 4.5 staff. For LEED PDX, the contractor is required to document and engage in the standard LEED certification process. The city is not involved in monitoring LEED PDX; USGBC certifies and works with contractors during the certification process.

Portland's Green Building Resource Center provides the training and information to other departments and managers to ensure Requests for Proposals have a green component. The Center also runs the Portland Green Building Fund and is spearheading a Process Management Program. The Process Management program assigns a project manager for each LEED project to ensure that delays are fewer and less costly. The project manager's job is to work with other bureaus to identify and solve possible problems before they become costly delays in construction schedule. The Center also provides a centralized resource guide of local building and zoning code regulations and relevant green building resources for private developers. [6]

CASE STUDY California LEED

Developed by the Sustainable Building Technical Group, a subcommittee of the State's Sustainable Building Task Force, the California Supplement to LEED (or CA LEED) was an attempt to raise the bar for several green building elements, "to inform the design community about State law and required and recommended sustainable building practices, set clear performance goals, while providing flexibility in how those goals are achieved; and assist the State in achieving its sustainable building goal for state facilities."[7] CA LEED was developed with the support and participation of USGBC.

CA LEED was more stringent and required certain building standards that are only optional in LEED. The supplement relied on a two-tier system of energy efficiency and sustainable building requirements and suggestions; some Tier 1 requirements were already state law. While buildings were required to meet all applicable Tier 1 measures, Tier 2 measures were implemented according to benefits and costs. The standard was intended to apply to new state construction, state renovations projects, state-leased properties, projects over 50,000 square feet, prototype buildings that can be replicated and impact buildings over 50,000 square feet, and highly visible buildings that serve an educational purpose. The supplement was to be managed by the Department of General Services and projects were expected to file with USGBC for official LEED certification.

CA LEED, which was to have been gradually incorporated into "significant" construction and renovation projects beginning in late 2001, was replaced by Governor Schwarzenegger's Green Building Executive Order in December 2004. The Executive Order mandates that the state achieve LEED silver certification for new construction.[8]

APPROACH #2 DEVELOPING LOCAL GREEN BUILDING STANDARDS

Some local governments have designed and implemented green building standards which are not dependent on USGBC and LEED standards, though some may be comparable. Typically, cities create departments or reorganize current departments within the local government to monitor and approve these building standards. Cities can use incentive programs, linkage fees, and policies to encourage and/or require both public and private economic development adhere to these standards.

Cities have created city specific building standards to encourage high performance building as well as implementation of other priorities such as:

- Encourage or mandate the construction of sustainable buildings in inner-city communities
- Prevent pollution and improve personal and community health
- Require that all economic development projects funded by the city are tied to job training and placement programs for underserved communities
- Incentivize the participation of inner-city communities in the development process from planning, design & construction

Santa Monica developed its own sustainable building guidelines in the late 1990s, before LEED standards were nationally recognized. Boulder, Colorado implemented a "Green Points Building Program" which required those obtaining new residential construction building permits to earn a minimum of "green points" depending on the type of construction, for implementing a variety of green building standards specified by the city. Other cities that have created city specific standards include Seattle and Denver.

THE FOLLOWING ARE OTHER NON-LEED SUSTAINABLE BUILDING STANDARDS:

California High Performance Schools Standards (CHPS): These green building standards were developed specifically for new California school construction. CHPS oversees the nation's only green building rating program especially designed for K-12 schools.

Minnesota Sustainable Design Guidelines (MSDG): These state-wide guidelines build upon LEED and other green building systems by providing 42 strategies organized into six environmental design guidelines. Similar to LEED, there is a scoring mechanism, however design teams set individual target goals for each project and there is no flat score a project must obtain. These guidelines are a way to gauge the degree of sustainable design used, but does not provide an end rating system.

Austin Energy's Green Building Program: The city began implementing green building technologies since 1993; however in 2000, the city passed a resolution to implement LEED silver certification for all municipal buildings.

BENEFITS OF DEVELOPING LOCAL STANDARDS

- Less time spent working with USGBC to negotiate LEED standards
- Standards are more tailored to local needs (can be more stringent or more flexible)
- Can still encourage LEED building in city

CHALLENGES OF DEVELOPING LOCAL STANDARDS

- Time consuming for cities to create and regularly update standards, including updating them to comply with changes in state law
- Requires more municipal management: the administrative system for monitoring compliance is internalized in the city – more staff needed

CASE STUDY

Santa Monica Green Building Design and Construction Guidelines

In 1994, the City of Santa Monica adopted the Sustainable Cities Plan which established a task force. The Green Building Program was one of the first recommendations made by the Sustainable City Task Force. "To help reduce these impacts and meet the goals of the Sustainable City Program," states the Santa Monica Green Building Program website, "the Task Force recommended that the City adopt a set of guidelines to facilitate the development of 'green' buildings in Santa Monica without forcing excessive costs or other burdens upon developers, building owners or occupants."

Over a three year period, the Green Building Design and Construction Guidelines were developed by City staff and consultants Sheltair Scientific Ltd., with the participation of the local design, construction, and development community. The sustainable city plan and the green building program were developed in a cooperative atmosphere with few disagreements and no opposition.

The Santa Monica Green Building program is primarily based on two city ordinances, the Construction and Demolition Waste Recycling Ordinance and the Green Building Ordinance, which is similar to LEED. However, according to Energy and Green Building Program staff, Santa Monica Green Building Standards are cheaper to achieve because of fewer and less demanding requirements, fewer documentation requirements, and lower fees. The Energy and Green Building Program set a new, higher standard for all buildings in the City of Santa Monica.

The Green Building Standards can be applied to institutional and commercial offices, light industrial buildings, commercial retail buildings, multi-family residences, hotels and motels, and major remodels. They are not intended for single family housing.

The Santa Monica Green Building Ordinance focuses on the following 10 areas: 1) Building Site and Form, 2) Landscaping, 3) Transportation, 4) Building Envelope and Space Planning, 5) Building Materials, Water Systems, 6) Electrical Systems, 7) HVAC Systems, 8) Control Systems, 9) Construction Management, and 10) Commissioning.

With only one full-time staff, the Energy and Green Buildings Program is currently housed under the Environmental Program Division. For both the City and the developer, there are minimal extra documentation and administration costs associated with the green building requirements and program. However, while there are plans for construction and post-construction inspections, the Green Building Program only inspects projects at the planning stage. As the Santa Monica staff noted, sustainable practices, including green building standards, have been simply incorporated on to Santa Monica's employee's job duties. Verifying green standards, Santa Monica staff pointed out, including the costs associated with the verification, is not much different from verifying regular standards.

Santa Monica now uses LEED standards and set a goal of achieving 100% LEED certification for all public and private buildings over 10,000 square feet. Santa Monica is trying to promote private LEED construction or major renovation through expedited permitting and cash awards between $20,000 and $35,000 depending on the level of LEED certification.[9]

INSTITUTIONALIZING CITY GREEN BUILDING STANDARDS

Cities institutionalize green building standards by passing resolutions or ordinances. Over 50 U.S. cities have passed resolutions or ordinances to encourage or require green building.[10] This section discusses different ways cities have institutionalized green building standards and proposes elements of a model ordinance that would encourage healthy job creation in the green sector.

Some cities use resolutions which are also adopted by a governing body but are less formal than ordinances. Resolutions often precede the passing of an ordinance.

There are multiple ways ordinances and resolutions encourage or mandate green building,[12] such as :

An ordinance is a law adopted by a town or city council, county board of supervisors or other municipal governing board. Typically, local governments issue ordinances establishing zoning and parking rules, regulating noise, garbage removal, and the operation of parks and other areas that affect people who live or do business within the locality's borders.[11] Once passed by city government, these ordinances become part of the municipal code and thus become legally binding.

ORDINANCES THAT ADD GREEN COMPONENTS TO THE MUNICIPAL CODE

Adding green building standards to the municipal code through ordinances makes the requirements legally binding.

- San Francisco passed an ordinance in May 2004 to alter the current environment code to adopt and incorporate new provisions for green building design principals for City construction projects and to reconfigure the existing Resource Efficiency Building task Force. The Green Building Standards portion of the Environment Code requires all new municipal construction projects to achieve at least a LEED Silver rating and that a LEED accredited professional must be a member of the design team.[13]
- Pleasanton, California's ordinance requires commercial and civic green building over 20,000 square feet to be LEED certified.[14]
- Oakland, California's ordinance added to the municipal code the requirement that municipal building projects with construction costs of at least $3 million must meet a minimum Silver LEED rating system and be certified by the USGBC.[15]
- Dublin and Livermore, California passed similar ordinances amending the municipal code by adding a new chapter mandating green building practices for city projects.[16]

ORDINANCES REQUIRING/ENCOURAGING GREEN BUILDING AND INCLUDING INCENTIVES

Incentives to encourage green building typically include fast-tracking the construction process.

- Gainesville, FL's ordinance requires all government buildings be LEED certified and will fast-track building permit incentives and allow a 50% reduction in the cost of building permit fees for private contractors who use LEED.[17]
- Issaquah, WA encourages developers to use LEED by providing free professional consultation and placing projects achieving LEED certification to the head of the building permit review.[18]
- Chatham County, GA's ordinance gives full property state and county tax abatement for any building achieving LEED Gold certification for the first five years, then taper off by 20% each year until the tenth year.[19]

RESOLUTIONS TO IMPLEMENT GREEN BUILDING PROGRAMS OR POLICIES

Local government passes resolutions in order to put into place a city program or policy. For green building policies, most cities use resolutions to mandate the use of a plan. Resolutions can be very general and may not include policy implementation details. Depending on the specificity of the plan, a resolution may simply be an encouragement to build green, not a mandate.

- Seattle, Washington passed a resolution implementing a Sustainable Building Policy which calls for all City-funded building projects with over 5,000 square feet of occupied space to achieve the Silver Level of the LEED (Leadership in Energy and Environmental Design) Rating System.[20]
- Portland, Oregon passed a resolution to implement LEED PDX, a supplement to LEED standards.[21]
- Houston, TX adopted a resolution requiring all city-owned buildings and facilities over 10,000 square feet to use LEED to the greatest extent practical and reasonable with a target of LEED silver rating.[22]
- Berkeley, California passed a 2003 resolution adopting a LEED building policy for city buildings.[23]

COMPONENTS OF A MODEL GREEN BUILDING POLICY

Many American cities have already established green building programs and policies through various ordinances and resolutions. However, green building includes more than simply a governmental directive to use sustainable building materials. Creating a sustainable green building policy can also help stimulate the regional economy as local projects provide quality jobs opportunities for local workers and stimulate demand for green products.

The public sector can help reduce skepticism in the private sector by:

SERVING AS A PUBLIC MODEL FOR GREEN BUILDING PRACTICES. *A broad range of sustainable building practices can be implemented that encourages and shows the efficacy of using sustainable products and developing "green" jobs.*

STIMULATING DEMAND FOR GREEN PRODUCTS. *The growing popularity of green building among governmental entities is a unique opportunity to encourage the growth of a local green industry.*

ENCOURAGING THE GROWTH OF JOBS IN THIS NEW "GREEN" SECTOR. *The new demand for municipal greening efforts can stimulate local job creation in occupations and trades related to green construction, manufacturing and building operations. This prepares the local workforce for future growth and participation in what inevitably will be the industry norm.*

IMPLEMENTING SUSTAINABLE PRACTICES *that facilitate a healthier environment for all residents and workers.*

Based on examples from other cities, this chapter outlines key components of a model green building policy that ties green building to a local economic development strategy. These policy components include:

- Building Requirements Based on Accepted Standards such as LEED
- Local Green Purchasing Requirements
- Living Wage/Local Hiring Requirements
- Budget allocations and Financial Mechanisms
- Oversight and Enforcement

BUILDING REQUIREMENTS BASED ON ACCEPTED STANDARDS SUCH AS LEED

Eligibility of Project & Exemptions: Many ordinances determine eligibility for greening based on building size.

- San Francisco's environmental code requires new municipal construction projects over 5,000 square feet to be LEED silver rated or higher.[24]
- Pleasanton requires all "covered" city projects to be LEED certified and exempts historic structures, but recommends implementing as many sustainable practices as feasible without compromising the historical integrity of the structure.[25]
- Portland's ordinance includes all facility projects constructed, owned, managed or financed by the city; ongoing and future program areas (urban renewal areas and development loan/grant fund programs) and the constructions, operations and maintenance of public infrastructure that serves building development.[26]
- All Dublin city projects initiated on or after March 16, 2004 with an estimated construction cost of $3M or greater must meet LEED silver rating (or city-approved equivalent) and registered and certified by USGBC.[27]

Specific Conditions of Greening: Most ordinances require projects to be LEED certified, or require buildings to include a specified number of sustainable building practices.

- Berkeley's green building resolution requires municipal buildings over 5,000 square feet to achieve LEED certification in 2004 and 2005 and a LEED Silver rating in 2006 and beyond.[28]
- Most cities require greening of projects over 5,000 square feet.

LOCAL GREEN PURCHASING REQUIREMENTS

Construction projects require extremely large amounts of labor and raw or processed materials. Where these materials come from and how they are extracted or processed can have a large and long-lasting effect on a community's environment and economy. Cities using LEED standards secure local purchasing as a part of the LEED point system. Local purchasing requirements are particularly important when cities create their own standards to reduce the environmental impact of transporting goods and increase the amount of economic benefit to the region. For example, buying the materials needed for asphalt from local producers could increase the number of jobs available in a community and keep local investment in the community. Similarly, purchasing recycled and environmentally friendly products can improve overall health in the community and ensure sustainable operation, protecting quality of life for future generations. As a result, many local governments require or encourage the purchase of recycled products. In addition, businesses may be encouraged to use local sustainable purchasing in order to add value as they bid for city-funded contracts. Local governments encourage investment in local green products in the following ways:

"GREEN" PURCHASING REQUIREMENTS: *Purchasing requirements are specific and binding statements referring to purchasing practices for localities to abide by. These can vary widely from requiring the purchase of a specific type of a product or set of products to requiring the purchase of products that meet certain criteria. More specifically, the products included in these requirements may be as specific as recycled paper or as broad as every purchase.*

- L.A. County requires all agencies to use at least 20% recycled bond paper when the price is within 10% of the lowest bidder.[29]
- President Clinton signed an executive order in 1998 to encourage environmentally preferable purchasing.[30]
- The city of San Jose requires all departments to identify and purchase the most environmentally responsible products.[31]

PREFERABLE PURCHASING POLICIES: *While most governments are bound by feasibility requirements which force or strongly encouraging them to accept the lowest bid on projects, many governments have instituted preferable purchasing policies, giving price preferences to bids from environmentally responsible providers or for environmentally responsible products. Instead of opting for the cheapest contract bids, they are given some price flexibility, enabling governments to choose comparably priced, but still environmentally responsible contracts.*

- Los Angeles County gives a 5% price preference to re-refined oils.[32]
- The state of Hawaii gives several price preferences on a sliding scale to products produced, manufactured, or mined in Hawaii.[33]
- The state of Michigan sets aside all printing for Michigan printers.[34]

LOCAL HIRING/LIVING WAGE REQUIREMENTS[35]

Including a component on local hiring ensures that quality job opportunities are created in the green industry for local residents. LEED standards encourage local employment through requiring the purchase of local goods to reduce toxins associated with transporting goods but do not include requirements specifically aimed at economic development of working class communities. Many cities and other large government institutions implement local hiring requirements or living wage requirements to ensure that surrounding communities receive an economic benefit from local development.

ELEMENTS OF LIVING WAGE REQUIREMENTS: *Over 90 cities have living wage requirements.[36] Living wage ordinances set a mandated wage Floor–an hourly rate that is identified as a livable wage for the locality–and defines the employees who are covered. Most often, the ordinance applies only to employees working on municipal service contracts over a given threshold, such as $25,000. Requirements depend on the amount of the amount of the contract and/or public subsidy received, though non-profits may be exempt in some cities.[37]*

- Los Angeles passed its living wage requirement in 1997, requiring those who earn $25,000 contracts or more with the city to pay living wage and benefits or a higher wage without benefits
- In California, the living wages floor without health care ranges from $8.50 to $14.75 per hour.

Elements of Local Hiring Requirements: *Elements of hiring requirements vary greatly but usually include length of hiring, number of local hires and total work hours completed by local hires, etc. Including requirements that the permanent, non-construction workforce maintain a high level of resident workers ensures a long-term impact for the community. Offering additional incentives to companies that hire more than the suggested percentage also creates greater employment opportunities for local workers without imposing any new regulations or expectations on the businesses. If hiring goals are met, cities may provide incentives, such as permit fee waivers or expediting permits. Current hiring goals are generally broad, due to the variation in individual projects, and are created to aid in providing opportunities for local residents without hindering development by imposing a large cost.*

- Santa Cruz County's ordinance requires a good faith effort so that no less than 50% of the contractor's workforce, measured in total work hours, is completed by Monterey Bay area residents.[38]
- Hartford, CT requires that 40% of trade project hours be completed by local residents, 25% of the trade project hours must be performed by minorities and at least 6.9% completed by women; 1 in 5 workers must be apprentices and 50% of these apprentices must be city residents; the permanent workforce must be at least 50% resident and 45% minority and 25% of city work is set aside for small and minority contractors.[39]
- All Oakland, CA Redevelopment Agency projects and city construction projects of $50,000 or more must hire Oakland residents for at least 50% of all work hours and for 50% of all new hires.[40]

Eligibility: *Defines the local boundaries for "local hires" and what types of businesses or projects must hire locally*

- Boston's requirements apply to all for-profit and non-profit employers with over 25 employees provided that the employer receives over $100,000 in city assistance.[41]
- Hartford, CT's ordinance requires all publicly assisted projects over 40,000 square feet hire resident apprentices during construction and a set level of city residents who are minorities and women in permanent positions.[42]
- Portland requires local hires from the North/Northeast and Outer Southeast parts of the city, while other cities require local hires to be residents of any part of the city.[43]
- San Francisco's "first source hiring" ordinance requires hiring economically disadvantaged residents for city-funded projects.[44]
- Santa Cruz County's local hiring applies to all Monterey Bay, Santa Cruz and San Benito County residents or residents whose hiring halls are located in these areas.[45]
- New businesses located within the boundaries of Los Angeles' business tax incentive areas, must hire residents that live in the designated business tax incentive area.[46]

Referral mechanism/Program operations/management[47]: *Local hiring programs are often connected to "First Source" hiring programs which assist in placing local workers with jobs. A resident hiring policy with a first source program is likely to be most effective. Many cities use "first source hiring" ordinances, which implement job programs designed to increase a particular population's access to timely information about job openings and to expand real opportunities for the economically disadvantaged to achieve more gainful employment. A First Source agreement directs employers to offer local people the chance to compete for jobs, yet which retains the employer's autonomy in the actual hiring decision, can produce substantial numbers of direct job hires of unemployed and under-employed residents in the private sector.*

- The City of Oakland partners with 35 community based organizations that work as outreach and referral agents, and the local union, that places qualified construction workers at publicly financed jobs. The community based organizations assess individuals and refer them to the local union hall.[48]
- Portland's First Source Program (JobNet), now incorporated into state one-stop employment centers, targeted the residents of largely low-income communities of color and provides employees for local hiring requirements.[49]
- Many cities, like Atlanta, created registries with available jobs and applicants and designate government agencies or nonprofit entities to implement the requirements in order to monitor the number of jobs and placements.[50]
- LA Community College District affirmed that its LEED standards were compatible with Project Labor Agreements it had in place.[51]

ENFORCEMENT: *Although lacking in many ordinances, designating an enforcement agency is important in assuring effectiveness. Many ordinances fall short of initial intentions due to lack of oversight and enforcement of provisions.*

- Termination of contract and debarment from receiving contracts up to 2-3 yrs is a common sanction.
- Fines and withholding project assistance are also common.

EXCLUSIONS AND EXEMPTIONS: *Most ordinances include a list of employers and individuals who are exempt from the provisions of the ordinance. These can be broad like nonprofit entities or youth programs or firm-specific such as firms working in education or with job training programs.*

- Providence's ordinance excludes all supervisory positions and those filled from internal promotions.[52]
- Minneapolis' ordinance provides a list of over 15 exemptions including 501(c) organizations, small businesses, organizations with collective bargaining agreements, and historic preservation projects.[53]

BUDGET ALLOCATIONS AND FINANCIAL MECHANISMS

Continuous funding is necessary when crafting a long-term green policy. Some ordinances direct the city to insert green building programs into their budget planning and/or direct the city agency or task force to create financial mechanisms. Stipulations in the municipal code often require green building to be included in city budgets.

OVERSIGHT AND ENFORCEMENT

TASK FORCE

Including a task force structure into the ordinance can improve oversight and involve all relevant parties in implementing a green building jobs program. Involving local community organizations, unions and other external organizations can ensure the program receives a broad base of support and is carefully monitored. For example, Seattle has a "Green Building Team" that includes directors of departments. While many green building ordinances do not include language that formalizes a task force structure, other municipal programs, often focused on reducing crime or poverty in an area or pertaining to local investment and building, include broad task forces that play a pivotal role in governing vital programs.

- The city of Boston created the Living Wage Committee in accordance with the creation of its first source hiring program. The committee is comprised of seven members including members of labor, community organizing, and the chamber of commerce all serving three-year terms.[54]
- San Francisco created a resource efficient building task force to oversee and assist in making city buildings efficient. This taskforce consisted of the mayor and representatives from ten departments.[55]
- Baton Rouge created a blight elimination team comprised of over twenty members with very specific tasks and a penalty for "maintaining blight."[56]

CITIZEN OVERSIGHT COMMITTEE

Establishing a citizen oversight committee can ensure the jobs program and green building policies receive adequate funding and support. Often required as part of bond measures that focus on public infrastructure repairs, oversight committees with community members assist in providing public reports on the status of the project. The committee ensures funds are invested as the voters intended and that projects are completed wisely and efficiently. The oversight committee reports to the taskforce or other governing board. Selection can occur based on the mayor's discretion and approved by the city council or by the taskforce. The oversight committee should ideally represent those with expertise in green building, labor, economic development and community interests.

Compliance, penalties for non-compliance, monitoring mechanisms, waivers for hardship exemptions, enforcement

Implementation challenges can be reduced by detailing in advance how the policy should be implemented, who is required to comply, consequences for non-compliance, and the agency responsible for monitoring. In addition, it is common practice to provide severability (i.e. a clause that allows that any portion of the contract deemed to be unenforceable does not affect the validity of the rest of the contract). Cities vary in their compliance process, with some municipalities mandating that a certain department must enforce the ordinance but providing little direction, and other ordinances laying out a detailed process.

- A clear process and timeline for submitting appropriate paperwork and permits, and reviewing plans.
- A process if the project does not meet sufficient sustainable standards – withholding permits, fines, etc.
- Department or officer in charge of monitoring: often a "green building compliance officer."

NOTES

1. United States Green Building Council Website. http://www.usgbc.org/DisplayPage.aspx?CategoryID=19
2. All new city-funded construction over 7,500 square feet must be LEED certified, according to Los Angeles City Council File #02-0182. Los Angeles City Council File #07-100. "LEED SILVER STANDARD / NEWLY BUILT CITY FACILITIES"
3. Los Angeles County Board of Supervisors meeting, January 16, 2007.
4. United States Green Building Council Website. http://www.usgbc.org/DisplayPage.aspx?CategoryID=19
5. City of Seattle, Sustainable Building website. Accessed October 2006. Available at http://www.seattle.gov/light/conserve/sustainability/
6. City of Portland, Office of Sustainable Development Website. Accessed October 2006. Available at http://www.portlandonline.com/OSD
7. Interview with Kathy Frevert, California Integrated Waste Management Board
8. Interview with Dan Burgoyne, California Department of General Services
9. Interview with Greg Rights, Santa Monica
10. See Index of Municipal Green Building Ordinances/Resolutions for a sample.
11. Definition from Nolo. www.nolo.com
12. LEED Initiatives in Governments and Schools, USGBC, June 2006. See "For More Information" for links to specific municipalities.
13. See City and County of San Francisco Municipal Code, Chapter 7, "Resource Efficiency Requirements."
14. See Pleasanton Municipal Code, Ch 17.50
15. See Oakland Municipal Code, Ch 15.35
16. See Dublin Municipal Code, Ch. 5.61 & Livermore Municipal Code, Ch.15.74
17. See Gainesville Municipal Code, Ch. 6, article 1.5
18. City of Issaquah Resource Conservation Office, Sustainable Building Incentives.
19. See Chatham County Code, Ch 7
20. See Seattle's Sustainable Building Policy, Ch. 6
21. City of Portland Office of Sustainable Development Website. Accessed October 2006. Available at http://www.portlandonline.com/OSD
22. See Houston Green Building Resolution #2004-15, passed on June 23, 2004.
23. Green Building Resolution 62284, passed by Berkeley City Council, November 18, 2003.
24. See City and County of San Francisco Municipal Code, Chapter 7, "Resource Efficiency Requirements."
25. See Pleasanton Municipal Code, Ch 17.50
26. City of Portland, Office of Sustainable Development Website. Accessed October 2006. Available at http://www.portlandonline.com/OSD
27. See Dublin Municipal Code, Ch. 5.61
28. Green Building Resolution 62284, passed by Berkeley City Council, November 18, 2003.
29. Los Angeles County, Department of Public Works. Los Angeles County Procurement Program Procurement Policy. Accessed August, 2006. Available at http://ladpw.org/epd/awards/procurement.cfm
30. "Greening the Government through Waste Prevention, Recycling and Federal Acquisition." September 14, 1998 Executive Order 13101. Accessed http://www.ofee.gov/eo/13101.htm
31. City of San Jose Council Policy 4-6. Environmentally Preferable Procurement Policy. September 25, 2001. Accesssed http://www.ciwmb.ca.gov/BuyRecycled/Policies/SanJoseEPP.doc
32. Los Angeles County, Department of Public Works. Los Angeles County Procurement Program Procurement Policy. Accessed August, 2006. Available at http://ladpw.org/epd/awards/procurement.cfm
33. State of Hawaii, State Procurement Office. Accessed July 2006. www.hawaii.gov/spo/SPO/Code/SPO/Code/preferences.pdf
34. State of Michigan. State Laws Affecting Procurements. Accessed July 2006. http://www.michigan.gov/doingbusiness/0,1607,7-146-6579_8408-20051--,00.html
35. Policy Link website. Local Hiring Strategies. Accessed January 2007. Available at http://www.policylink.org/EDTK/LocalHiring/action.html
36. Economic Policy Institute. Living wage issue guide. Available at http://www.epinet.org/content.cfm/issueguides_livingwage_livingwage
37. Reich, Michael. 2003. "Living Wage Ordinances in California." Institute of Industrial Relations. Available at http://www.iir.berkeley.edu/livingwage/index.html
38. See Santa Cruz County Code, Ch. 2.33
39. See Hartford Municipal Code, Div. 5
40. Policy Link website. Local Hiring Strategies. Accessed January 2007. Available at ttp://www.policylink.org/EDTK/LocalHiring/action.html#Action4
41. See Boston Municipal Code Ch. 24
42. See Hartford Municipal Code, Chapter 2
43. Policy Link website. Overview of First-Source Hiring and Portland's Jobnet. Accessed January 2007. http://www.policylink.org/EDTK/LocalHiring/action.html#Action6
44. See San Francisco Municipal Code, Ch. 83
45. See Santa Cruz County Code Ch. 2.33
46. See Los Angeles Municipal Code, Ch. 2.204
47. Policy Link website. Local Hiring Strategies. Accessed January 2007. Available at http://www.policylink.org/EDTK/LocalHiring/action.html
48. Ibid.
49. Ibid.
50. See Atlanta Municipal Code, Article XI
51. Los Angeles College Community College District Proposition A Facilities Project Labor 2001.
52. See Providence Municipal Code, Article III 1/2
53. See Minneapolis Municipal Code. Ch. 38
54. See Boston Municipal Code, Ch. 24
55. See San Francisco Municipal Code, Sec. 702
56. See Baton Rouge Municipal Code, Ch. 11

FOR MORE INFORMATION

United States Green Building Council	http://www.usgbc.org
State and Local LEED toolkit	http://www.usgbc.org/Docs/Member_Resource_Docs/toolkit_statelocal.pdf
Portland's Green Building Resource	http://www.green-rated.org
Santa Monica Green Building Program	http://www.greenbuildings.santa-monica.org/ http://www.santa-monica.org/epd/
California Supplement to LEED	http://www.ciwmb.ca.gov/GreenBuilding/Design/LEEDforCA.doc
Seattle Supplement to LEED	http://www.seattle.gov/sustainablebuilding/cityprojects.htm
Federal, State, Local and school LEED Initiatives	http://www.usgbc.org/resources -- click on government for document link
Sustainable Development Ordinance & Specifications	http://www.ci.austin.tx.us/sustainable/sustcodes.htm
Matrix of Municipal Green Building Programs	http://www.planning.org/zoningpractice/pdf/ZPApr05Matrix.pdf
Model Green Building Ordinances	http://www.stopwaste.org/home/index.asp?page=490
Oakland Green Building Ordinance	http://bpc.iserver.net/codes/oakland/_DATA/TITLE15/Chapter_15_35_GREEN_BUILDING_R.html
Berkeley Environmentally Preferable Purchasing Policy	http://www.besafenet.com/ppc/docs/purchasing/PU_BPP.pdf
Berkeley Green Building Resolution	http://www.ci.berkeley.ca.us/sustainable/government/62284.GreenBuilding.pdf
San Francisco Resource Efficiency Requirements	http://www.municode.com/content/4201/14134/HTML/ch007.html
State Preference Purchasing Practices	http://www.bpw.state.md.us/pdf/005B-96.pdf
NIGP Report on Preference Purchasing	https://www.nigp.org/common/restrict/pref/97prefrpt.htm
San Jose Environmental Preferable Purchasing Policy	http://www.ciwmb.ca.gov/BuyRecycled/Policies/SanJoseEPP.doc
Executive Order 13101 Greening through Government	http://www.ofee.gov/eo/13101.htm
Overview of First-Source Hiring And Portland's JobNet	www.cfed.org/publications/accountability/Accountability%20Mar%2099.pdf
Issaquah, WA's Sustainable Building Incentives	http://www.ci.issaquah.wa.us/Files/Sustainable%20building-commercial.pdf
Los Angeles Community College District Building Green	http://www.propositiona.org/green_room.html
California Green Building Initiative	http://www.energy.ca.gov/greenbuilding/index.html
California High Performance Schools Standards (CHPS)	http://www.chps.net/

GREEN FOR GREENING

CHAPTER THREE

LOCAL FINANCING STRATEGIES TO "GREEN" MUNICIPAL BUILDINGS

As capital improvement budgets shrink, finding creative financing solutions can be challenging. However, financing capital improvements is vital as city infrastructure continues to deteriorate. The city must establish short-term and permanent funding sources to finance energy efficiency capital improvement for municipal buildings. In order to upgrade infrastructure effectively, adequate resources must be secured for both the long- and short-term. Instead of relying on dwindling funds in the midst of high energy costs, the city must take creative steps in funding improvements.

Utilizing green technologies to improve infrastructure ensures that buildings are not only up to code, but provide healthy environments for public servants, saves money lost on inefficient buildings and assists in stimulating a local green industry. By financing the greening of local infrastructure, the city can also be a model for local developers and help create a demand for green products. As funding becomes available for green initiatives, the city must take advantage of these opportunities not only to improve their infrastructure, but also set the bar for quality capital improvements that add value in the long run.

Greening existing facilities not only protects and improves the city's assets but it creates job opportunities, demonstrates environmental stewardship, and improves public health. Additionally, greening the city's buildings can reduce the over-$38 million a year the City currently spends on energy and water use. Funding is critical to realizing this new green initiative. In order to assess the financial feasibility, this report provides an overview of current funding sources used by the City to fund overall municipal improvements. Current capital improvement funds can be used not only to renovate deteriorating infrastructure, but can also pay for energy efficiency upgrades which can save the city time and money in the long run. In addition, this report assesses additional sources that have potential for funding energy and water efficiency upgrades.

IN BRIEF

- The City's buildings are in a deteriorating condition, costing taxpayers millions of dollars in unnecessarily high energy bills and lost worker productivity.
- Since 2003, the City has relied on general obligation bonds to finance its building infrastructure needs, but by June 2007, all this funding will have been spent or allocated without making the necessary improvements to most buildings.
- At the current funding levels, the City can only fund a fraction of department's requests for capital improvements, maintenance and repairs. There is a great need to fund energy and water efficiency capital improvements, which can also save the city money.
- There are several opportunities for the City to increase funding for capital improvements including leveraging State and Federal dollars, municipal bonds and creating other opportunities for the private sector to invest in future savings from energy efficient capital improvements.

The City's building stock needs to be repaired and maintained to ensure that city workers and our communities have access to safe and healthy city facilities, and to ensure that our resources and tax dollars are efficiently used to free up public dollars for other public services.

WHO MANAGES CAPITAL IMPROVEMENT FUNDING?

Los Angeles City's Capital Improvement Expenditure Program (CIEP) coordinates all capital improvements financing throughout the city. Three programs within CIEP coordinate all of the city's capital improvements: the Municipal Facilities program, the Physical Plant program and the Wastewater Facilities program.

WHO FUNDS THE CAPITAL IMPROVEMENT EXPENDITURE PROGRAM?

Funding for CIEP comes from several different sources ranging from the City's general fund to voter approved bonds. Over $350M was allocated to CIEP in 2006-2007. In 2007-2008, the city plans to spend over $279M on CIEP.[1] Additional funds are leveraged from general obligation bonds and other external revenue funds such as the Solid Waste Resource Fund. The CIEP budget can be approved through the budget process or through a council motion. In either case, CIEP funding has to be approved by City Council and the Mayor. Additionally some funds need to be approved by other boards and committees after City Council and Mayoral approval. *(see Chapter Appendix for detail.)*

According to the City budget, Capital Improvement Projects are selected on a priority basis using the following criteria:

1. Recognition of safety or environmental needs;
2. Commitment to or coordination with the activities of other agencies;
3. Additional service requirements for growing areas;
4. Participation with citizens in the funding of assessment act projects;
5. Completion or continuation of previously authorized work;
6. Protection of previous investment in public works;
7. Provision of efficient facilities to support ongoing operations; and,
8. Maximization of grant funds. [2]

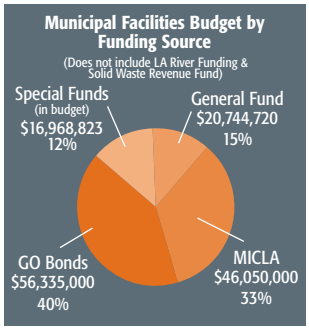
WHO COORDINATES BUILDING IMPROVEMENTS?

The Municipal Facilities Program is a program within CIEP that coordinates municipal building capital improvement projects of non-proprietary city departments. The program coordinates all city and public facilities and projects including, but not limited to, fire and policy stations, animal shelters, parks, libraries, LA River and equipment yards.

Funding for public facilities and building improvements is grossly under-funded. During 2006-07, the Municipal Facilities program received $37.7M from the city budget, which is just over 10% of the total $350M CIEP budget allocations.[3] Of the municipal facilities projects, 19% or $7.245M was spent on public buildings and facilities. This year, $31M will be spent on the municipal facilities program, 11% of the $279M allocated to CIEP. About $7.37 will be spent on public buildings, 24% of the budget for municipal facilities projects.[4] Over the last 6 years, from Fiscal Year 2001-2002 through Fiscal Year 2006-2007, only 7% ($128 million) of total on-budget CIEP funding was allocated to the Municipal Facilities Program, which includes new building and new building renovations. At the current funding levels, the City can only fund a fraction of department's requests for capital improvements, maintenance and repairs. As a result, the program must spend its funds addressing urgent maintenance needs such as leaking roofs, leaking underground tanks, elevator repair and asbestos removal.[5]

Four major sources are used to fund construction and renovation projects in 2006-2007: the city general fund, special purpose funds, general obligation bonds and the Municipal Improvement Corporation of Los Angeles bonds.[6] The following section provides a brief description of these funding sources.

CURRENT FUNDING SOURCE #1: GENERAL FUND



In 2005, the City of Los Angeles adopted a policy to earmark 1% of its General Fund Revenue for capital and infrastructure improvement projects, which includes street improvements as well as building facilities.[7] The policy was passed as an attempt to maintain the City's existing buildings. From fiscal year 2005-2006, General Fund allocation for capital improvement was $45.9M which exceeded 1% of the general fund. Of this amount, $17.7M or 39% was dedicated to municipal facilities.[8] However, in the years prior to passing this policy, the City spent 0.1-0.2% of general budget on capital improvements for municipal buildings. This year, only $11.6M of the general fund will be used for capital improvements, which is only 0.2% of the $4.4B general fund. Of this, $504,917 or 4% has been allocated to municipal facilities in 2007-2008.[9] Increasing general fund allocations for capital improvements to 1% ($44.3M) is still not enough to address the city's maintenance needs but would be a step in right direction.

The General Fund is used to account for resources that are not required to be accounted for in a separate funds including but not limited to: sales taxes, property taxes, transient occupancy taxes, licenses and permits, fines and forfeitures. This fund is used to finance most of the basic municipal functions such as: general administration, public safety and emergency services.

CURRENT FUNDING SOURCE #2: SPECIAL PURPOSE FUNDS

In 2006-2007, special funds financed over $323 million dollars in capital improvement projects, an increase of 22.5 percent from the allocations made in the 2005-2006 budget year. Almost $17 million or 5% of these special funds was spent on municipal facilities. In the 2006-2007 budget there was a 423% increase from 2005-2006 in spending on municipal facilities improvements from special funds. [10] Special funds in 2006-2007 account for nearly $2 billion of entire city budget. The top six special funds collect $1.35 billion a year.

Special purpose funds are derived from specific revenue sources, such as service fees and charges. These funds are allocated for specific purposes. For example, the Sewer Enterprise Fund accounts for the construction, operations and maintenance of the City's wastewater collection and treatment system. The special purpose funds are usually (parking and wastewater) allocated through multi-year capital improvement expenditure programs. Needs are assessed by studies and departments. CAO's office assesses funding options and needs and then makes the recommendation. The city council and mayor make the final decision.

CURRENT FUNDING SOURCE #3: BONDS

The City has relied on general obligation bonds[11] to finance its building infrastructure needs, however much of the bond funds have been spent or allocated. In 2006-2007, the City spent $56M or 43% of what was spent from bonds on capital improvement projects in 2005-2006.[12] For voter and non-voter approved debt, which includes general obligation bonds, the Mayor and the Council have set a debt payment limit of 15% the General Fund.[13] This year, voter approved debt obligation is estimated to be 8.45% which means there is room for the city to take on more general obligation bonds.[14]

The table below shows the $2.5 billion in capital improvement bonds approved by voters from 1998 to 2004.[15] At the end of the 2007-2008 fiscal year, unless new bonds are authorized by voters, the only general obligation bond with funds still available will be the Storm Water Projects general obligation bond (Prop O). After the 2007-2008 budget year, there will be roughly $455 million available in Prop O funds. All of Prop O funds, however, cannot be used for city building infrastructure and have already been allocated toward storm water projects.

Available General Obligation Bond Funds

Bonds	Voter Authorization	Amount Issued as of (1/1/07)	Remaining Funds	Projected 07-08 Issuance
Seismic Improvement	$376,000,000	$376,000,000	$0	$0
Fire Safety Improvements	$60,000,000	$60,000,000	$0	$0
Police Facilities	$176,000,000	$176,000,000	$0	$0
Branch Library Facilities	$53,400,000	$53,400,000	$0	$0
Zoo Facilities	$47,600,000	$47,600,000	$0	$0
Library Facilities	$178,300,000	$178,300,000	$0	$0
Fire Facilities	$378,506,000	$378,506,000	$0	$0
Animal Shelter Facilities	$154,142,000	$154,142,000	$0	$0
Citywide Security	$600,000,000	$583,705,936	$0	$0
Storm Water Projects	$500,000,000	$45,000,000	$455,000,000	$50,000,000
Total GO Bonds	$2,523,948,000	$2,068,948,000	$455,000,000	$50,000,000

Source: Los Angeles City Budget, 2007-2008.

CURRENT FUNDING SOURCE #4:

MUNICIPAL IMPROVEMENT CORPORATION OF LOS ANGELES (MICLA)

In 2007-2008, the city will receive $55.6M through lease-purchase agreements[16] with the Municipal Improvement Corporation of Los Angeles (MICLA). This group, a non-profit established by the city, sells public securities to finance the city's capital projects and capital equipment. In 2006-07, funding for capital improvement projects ranged from $800,000 to $19,000,000. In 2005, for example, $105 million from MICLA funds were used to finance the purchase and tenant improvements of the Transamerica DPW Broadway Building. Of the total $105 million, $65 million were allocated for tenant improvements to the facility. There is no limit in amount of funding that MICLA can provide to any single department or project and funding varies substantially from project to project.

The city limits non-voter approved debt, which includes MICLA, at 6% of general fund revenue. For the 2007-2008 budget, non-voter approved debt payment will be 3.56% of the general fund, slightly less than 3.92% in 2006-2007.[17] This year, Los Angeles will owe approximately $110 million in lease agreement to MICLA. The City is a major issuer with strong financial performance and operating flexibility. Although the City's broad revenue-raising flexibility was diminished following passage of Proposition 218 in 1996, sound fiscal management and a growing economy help make the City an attractive credit.

Created by the City of Los Angeles in 1984 for the purpose of funding equipment and other leases, MICLA plays no active role in either the procurement of funds or equipment, but must review and approve the projects proposed by the City for financing through MICLA. MICLA has become the primary equipment and real property leasing vehicle for the City. The properties and the equipment purchased by MICLA are leased to the city under long term agreements. The title of property leased through MICLA transfers to the city at the end of the lease agreement. If the City defaults under the Lease and Trust Agreements, the Trustee may terminate the lease and re-let the properties.[18]

Projects Funded by MICLA:

- *In 2005, MICLA funded the renovation of the Department of Public Works building for $100 million.*
- *City has allocated over $340 million in MICLA funds for Parker Center, the new downtown police headquarters.*
- *In 2005, $105 million in MICLA funds were used to finance the purchase and tenant improvement of the Transamerica DPW Broadway Building.*

Current funding sources do not generate enough revenue to finance the large-scale energy efficient capital improvement needs within the City. The following local, state and national agencies are examples of potential sources of funding for greening Los Angeles' municipal buildings. There are several funding sources that can finance energy efficient capital improvements immediately as well as sources that provide long-term financing.

IMMEDIATE FINANCING OPTIONS

LOS ANGELES DEPARTMENT OF WATER AND POWER (DWP) GRANTS AND LOANS

The DWP finances energy efficiency projects in the form of grants and loans. Projects include solar systems on several city buildings throughout the city as well as loans to the Department of General Services to conduct energy efficiency retrofits on two city buildings. The DWP can distribute loans and grant to provide immediate funding for energy efficient capital improvement projects. In addition, the DWP can create incentives for other city departments to upgrade their building by reducing rates for completing energy efficiency improvements.

The LADWP is the nation's largest municipal utility, providing services to more than 3.8 million Los Angeles residents and businesses. The department has about 640,000 water customers and 1.4 million electric customers. LADWP's operations are financed solely by the sale of water and electric services – no tax support is received. Additional capital funds are raised through the sale of bonds. LADWP's net assets were about $3.7 million in 2005. As a revenue-producing proprietary department, LADWP transfers about 7% of its annual estimated electric revenues and 5 percent of its water revenues to the city of Los Angeles General Fund.[19]

SOUTHERN CALIFORNIA GAS COMPANY FUNDING FOR MODEL PROJECTS

Southern California Gas Company's energy efficiency plans to spend $180 million in energy efficiency projects from 2006-08.[20] The Southern California Gas Company's advertised loans and grants are generally small but can provide some immediate funding to implement model projects as well as leverage additional resources other public and private entities.

A subsidiary of Sempra Energy, the Southern California Gas Company is a private utility that delivers gas to 19.8 million consumers throughout Southern California.

Southern California Gas Company Energy Efficiency Budget Allocations

YEAR	ALLOCATION *(in millions)*
2004	$22
2005	$27
2006	$48
2007	$61
2008	$74

CALIFORNIA ENERGY COMMISSION LOANS

CEC distributes low-interest (4.1-4.5%) loans to finance energy efficiency projects at schools, hospitals, and local governments. These loans can finance 100% of the project if simple payback is 9.8 years and the loans are repaid from saving within 15 years.[21] CEC energy efficiency loans are financed through revenue bond funds issued by the state. As of November 2006, there was roughly $30 million to be distributed during the next funding cycle.[22] Funds are anticipated to run out by 2008, at which point, another revenue bond expected to be issued.

The California Energy Commission (CEC) is the State's lead agency in charge of developing energy policy and planning. One of the primary responsibilities of the CEC is to promote energy efficiency by supporting high building standards and encouraging the use of renewable technologies.

CALIFORNIA PUBLIC UTILITIES COMMISSION GRANTS AND LOANS

In 2005, the California Public Utilities Commission (CPUC), which regulates privately-owned gas and electric utilities, authorized $2 billion for continuing PUC's commitment to energy efficiency.[23] The $2 billion investment in energy efficiency will be administered by the local investor-owned utilities (IOU's) and will be allocated between 2006 and 2008.[24] This expansion of energy efficiency efforts will continue to be funded by public benefits charge on investor-owned utilities. The CPUC has also begun encouraging collaborative energy efficiency relationships between public agencies and investor owned utilities. This could be a possible opportunity for LA City to follow LA County's leadership and work with Southern California Gas Company.

Earlier in 2006 the PUC unveiled a 10 year $2.8 billion dollar Solar Initiative plan.[25] The PUC's Solar Initiative will be financed by small charges paid by gas and electric investor utility customers. As it stands, the program expected to start in 2007 and this time the PUC will administer a small portion of the solar portion of the Solar Initiative funds and the IOUs will administer a majority of the funds. Los Angeles will be able to participate in the program through Southern California Gas Company.

ENERGY SERVICE COMPANIES & ENERGY SAVING PERFORMANCE CONTRACTS

Energy Service Companies (ESCOs) contract with private companies and cities to complete energy efficiency audits and retrofits with no outlay of money. Retrofit costs and the ESCOs fees are ultimately recouped through capturing the energy bill savings. Using Energy Savings Performance Contracts (ESPCs), governments and industrial firms that are interested in pursuing energy efficiency measures to contract with privately-run organizations specializing in energy efficiency.

ESCOs provide interested customers with detailed assessments of guaranteed energy savings and the costs needed to achieve these savings. ESCOs then perform the efficiency retrofits. After performing their initial assessment, ESCOs are able to provide customers with a set amount of time needed to pay back the costs of efficiency upgrades. Efficiency retrofits can save a lot of money, so payback periods for ESCOs are generally quite short, from 2-10 years. At the end of this payback period, a customer has a more efficient building that costs less to heat, cool, and light, without putting any money upfront. [26]

PUBLIC FINANCING OPTIONS

Below is a sample of the options cities may choose to finance longer-term major municipal infrastructure improvements. Further study will be needed to determine the feasibility of using these and other potentially viable public finance mechanisms to generate long term funding for greening city buildings.

LOCALLY RAISED FUNDS

- **Passing Voter-Approved Bonds:** Financing capital improvements, such as "greening" city buildings, can be done through voter-approved bonds. The city must pass an ordinance to place a bond measure on the local ballot and two-thirds voter approval is required at a general election. This option is a popular way to generate substantial amounts of funding while spreading the costs over time. An important consideration when implementing a bond is the debt that the city will accrue – the bond amount plus interest, increasing the total cost – which current residents and future residents will have to payback. Bonds also may not be used for on-going maintenance and operations.

- **Establishing A Community Facilities Districts:** Local Governments can establish districts to finance public facilities, infrastructure and public services through the Mello-Roos Act.[27] Two-thirds of the voters living in the district must approve the tax, which generally limits the use of this tool. The district serves as a mechanism for local taxes and bonds which can fund public green projects.

- **Special Taxes & Sales Taxes:** Local governments can levy parcel or sales taxes county-wide or in specified districts with the capacity to levy special taxes. Both parcel and sales tax measures require approval from two-thirds of the local governing body and two-thirds approval by registered voters in a general or special election.

LOS ANGELES CITY PENSION FUNDS INVESTMENTS

The City of Los Angeles can direct a percentage of its pension portfolios to investment in energy efficient capital improvements. Energy efficiency improvements typically generate enough energy savings for this to be a viable investment for public pension funds. Funds can be directed toward projects in several ways including: municipal bonds, loans, energy performance contracts. City employees contribute monthly to a pension fund, LA City Employee Retirement System (LACERS), which as 27,000 active members. The total value of LACERS investment portfolio is $9 billion. The City Treasurer invests & administers the fund. The City is investing more than $2 billion in corporations such as: Wal-Mart, Coca Cola, Tenet, Kroger, Chevron Texaco, and Halliburton as a part of their investment portfolio. [28]

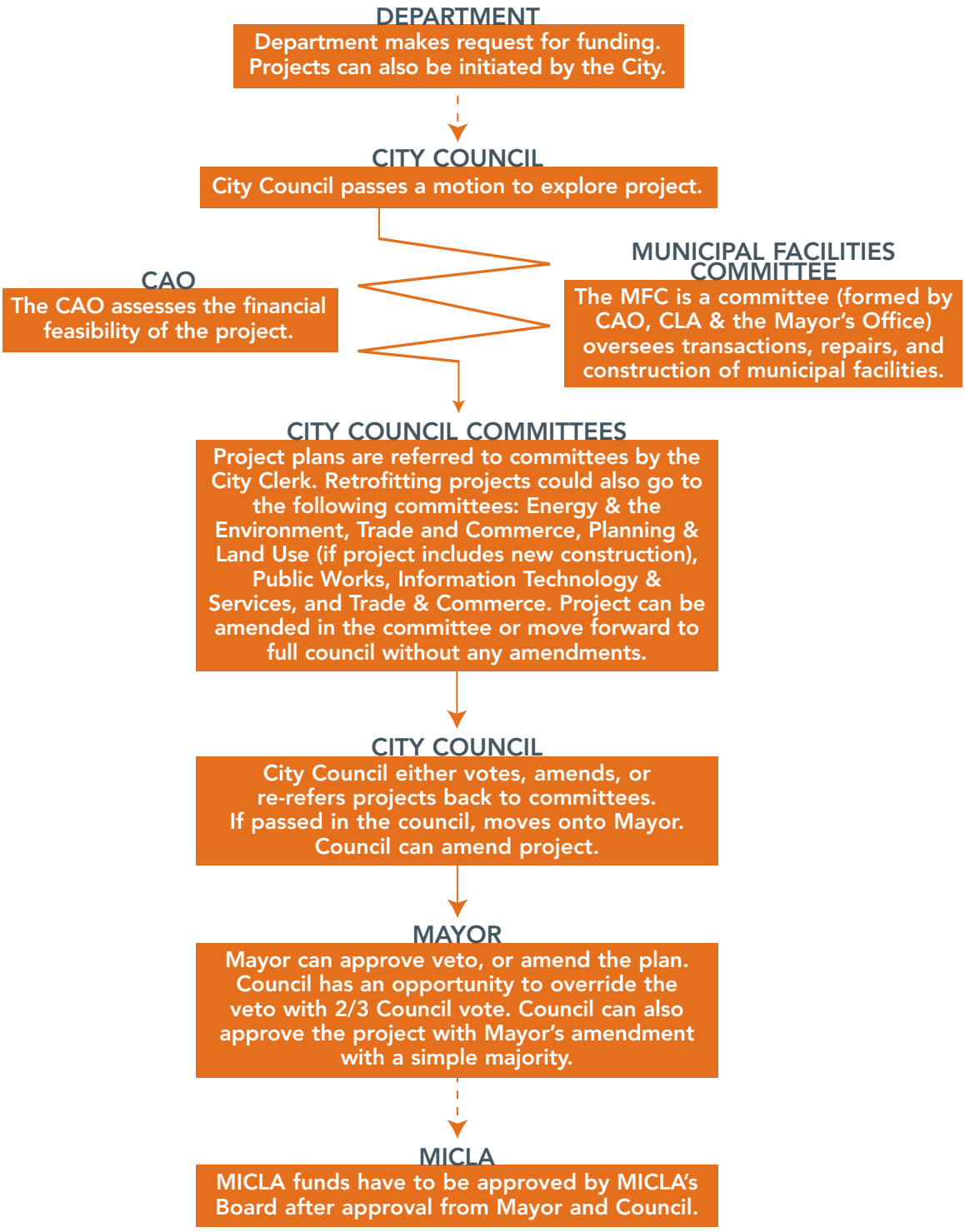
DWP also has a pension fund, City of Los Angeles Water and Power Employees' Retirement, Disability and Death Benefit Insurance Plan. The total market value of DWP's pension investment fund is almost $6 billion.

MAKING SOCIALLY RESPONSIBLE INVESTMENTS:
LA's largest public pension funds - Los Angeles City Employees Retirement System (LACERS); Los Angeles County Employee Retirement Association (LACERA); Los Angeles Department of Fire and Police Pensions (LAFPP) have agreed to invest $65 million in Genesis Workforce Housing Fund II, a private equity real estate fund managed by Phoenix Realty Group that will create affordable workforce housing developments

PRIVATE FINANCING: *THE CITY OF LOS ANGELES' PRIMARY BANKING INSTITUTION – BANK OF AMERICA*

Bank of America is currently the city's primary bank holding over $12.6 billion in city revenues every year. Bank of America profits by investing a percentage of the city's bank deposits worldwide. While Bank of America does invest some of these funds toward projects that benefit the public, there is no policy requiring the bank to make investments locally. Both the Bank of America and the City of Los Angeles can benefit by establishing a program that directs a small percentage of the banks investments funded by city deposits toward capital improvements and other economic development projects.

Decision Making Process for Approving Capital Improvement Project during the Yearly Budget Process



NOTES

1. City of Los Angeles. 2007-08. Los Angeles City Budget Los Angeles City Budget Blue Book. Capital Improvement Expenditure Program Summary, page 507. This amount does not include MICLA, General obligations bonds, solid waste resources revenue fund and the LA river project funding which are considered "other funds" off the city budget.
2. Ibid, page 505.
3. Ibid, page 532. The $350M does not include MICLA, General obligations bonds, solid waste resources revenue fund and the LA river project funding which are considered "other funds" off the city budget. These additional funding sources account for approximately $724M of the remaining municipal facilities budget.
4. City of Los Angeles. 2006-2007. Los Angeles City Budget. Capital Improvement Expenditure Program, page 169.
5. City of Los Angeles. 2007-08. Los Angeles City Budget Los Angeles City Budget Blue Book 2007-2008. Capital Improvement Expenditure Program, Municipal Facilities, page 509.
6. Funding for municipal facilities also includes the Solid Waste Resource Revenue Fund, which funds all capital and operational activities associated with solid waste collection, recycling, recovery, and disposal for the city. Because these funds have a specific allocation and are not part of the city budget's special funds, they are not described in depth in this section. See City of Los Angeles. 2006-2007. Los Angeles City Budget. Special Revenue Funds, page 10.
7. City of Los Angeles. April 2006. City Administrative Officer. Proposed Budget: Supporting Information for the Budget and Finance Committee. Page 17. The policy states, "To the extent possible, the City shall annually budget one percent of General Fund revenue to fund capital or infrastructure improvements. This policy recognizes the importance of maintaining the City's capital assets on a regular basis to avoid major deferred maintenance and to extend the useful life of the asset."
8. City of Los Angeles 2006-2007. Los Angeles City Budget Blue Book. Capital Improvement Expenditure Program Summary, page 533.
9. City of Los Angeles. 2007-2008. Los Angeles City Budget Blue Book. Capital Improvement Expenditure Program Summary, page 507.
10. City of Los Angeles. 2007-2008. Los Angeles City Budget Blue Book. Capital Improvement Expenditure Program, Summary and Municipal Facilities, pages 505 & 509.
11. General Obligation Bonds are backed by the city's credit and taxing power.
12. City of Los Angeles. 2006-2007. Los Angeles City Budget Blue Book. Capital Improvement Expenditure Program Summary, page 532.
13. City of Los Angeles. 2007-2008. Los Angeles City Budget. City Debt Policy Statement, page 274.
14. City of Los Angeles. 2007-2008. Los Angeles City Budget. City Debt Policy Statement, page 274.
15. City of Los Angeles. 2007-2008. Los Angeles City Budget . Statement of Bond Indebtedness and Other Obligations, page 275.
16. City of Los Angeles. 2006-2007. Los Angeles City Budget Blue Book. Capital Improvement Expenditure Program Summary, page 532. For more information on Lease and Lease-purchase agreements: "Financing Energy Efficiency in Buildings." U.S. Department of Energy. Rebuild America Guide Series.
17. City of Los Angeles. 2007-2008. Los Angeles City Budget. City Debt Policy Statement, page 274.
18. City of Los Angeles. April 2005. Financial Policies for the City of Los Angeles. Page 22.
19. Los Angeles Department of Water and Power website. Accessed May 15, 2006. Available at www.LADWP.org.
20. California Public Utilities Commission Application of Southern California Gas Company for Approval of Natural Gas Energy Efficiency Programs & Budgets for Yrs 2006-2008. http://www.socalgas.com/regulatory/cpuc.shtml
21. Loans are dispersed in the form of reimbursements. Simple payback is the amount of time it will take to recover the initial investment in energy savings, dividing initial installed cost by the annual energy cost savings.
22. California Energy Commission. Notice of Available Funding. Accessed May 15, 2006. http://www.energy.ca.gov/contracts/efficiency_pon.html
23. California Public Utilities Commission (CPUC) only regulates investor owned utilities. LADWP and other publicly owned utilities are outside CPUC's regulatory power.
24. California Public Utilities Commission website. Accessed May 15, 2006. Available at http://www.cpuc.ca.gov/static/061211_egyleadership.htm
25. California Public Utilities Commission website. Accessed May 15, 2006. Available at http://www.cpuc.ca.gov/static/energy/solar/aboutsolar.htm
26. Apollo Alliance Website. Accessed on April 8, 2006. Available at www.apolloalliance.org.
27. Gov't Code §§ 53311.
28. Los Angeles City Employees' Retirement System website. Accessed May 15, 2006. Available at http://www.lacers.org/Investments/index.htm

CONCLUSION

Across the country, citizens are asking for change. Recent opinion polls show that Americans want our government to take action to stop global warming.[1] Local governments are hearing the call and leading the way toward more sustainable cities. Across the country, many cities have already established greening programs and policies. The growing popularity of green building among governmental entities is a unique opportunity to encourage the growth of a green industry – an industry that can provide quality, unionized jobs while implementing sustainable practices that facilitate a healthier environment for all communities.

Cities like Los Angeles can be a leader in this new green economy by developing a long-term plan for equitable development that creates quality job opportunities for poor and working class inner city communities, supports key regional industries and involves an open and accountable process. The city in partnership with a task force of community members, labor, businesses and environmentalists, can ensure that the city's greening efforts benefit everyone.

Nurturing a green economy in America's urban centers can be one of the solutions toward creating long-term regional economic development. We hope Green Cities, Green Jobs stimulates discussion on how cities can take the lead and help stimulate the regional green economy, starting with "greening" current deteriorating building stock and providing quality jobs for its residents.

1. ABC News/Washington Post/Stanford University Poll conducted April 5-10, 2007, N=1,002 adults nationwide, MoE ± 3,Fieldwork by TNS. Greenberg Quinlan Rosner Survey, conducted March 19-22, 2007, N=1,000 registered voters, MoE ± -3.1% was conducted for American Progress.

GREEN CITIES, GREEN JOBS

APPENDIX

APPENDIX I:
MUNICIPAL GREEN BUILDING ORDINANCES/RESOLUTIONS INDEX

IN BRIEF

There are multiple ways ordinances are used to promote green building:

- Direct ordinances require cities construction to be green
- Ordinances implement green building programs or policies
- Ordinances encourage green building through incentives
- Ordinances that add green components to the municipal code

ORDINANCES THAT ADD GREEN COMPONENTS TO MUNICIPAL CODE

Ordinances targeted at greening municipal buildings

OAKLAND

http://bpc.iserver.net/codes/oakland/_DATA/TITLE15/Chapter_15_35_GREEN_BUILDING_R.html

Oakland's Green Building Ordinance, unanimously adopted On April 26, 2005, requires all City Building projects that equal or exceed $3 million in construction costs to meet a minimum Silver rating under the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) rating system, and be so certified by the USGBC.

- Required for public buildings
- Optional, but incentives provided for private projects
- Designed for new projects – covered public facilities and traditional public works projects
- Uses LEED standards – silver required for city buildings
- No process for exemption or consequences for non-compliance – City administrator will promulgate any rules appropriate to achieve compliance
- Adds to city code

PLEASANTON

http://www.ci.pleasanton.ca.us/pdf/greenbldg.pdf

The ordinance addresses commercial and civic green building.

- Only commercial and civic new building construction
- LEED "certified" required – not any particular rating
- Adds chapter to city municipal code
- Historic buildings and downtown specific plan area are exempt
- No building permit until green building components are approved

COOK COUNTY, IL

http://www.cookctyclerk.com/agendas/2001/020601/ordinance.htm

This 2001 ordinance requires all newly constructed county facilities to be built to the LEED silver standard of certification. Section 326 of the Lake County, Illinois, building code is an "all-or-nothing" optional code that permits builders to use non-compliant building elements and systems if the builder complies with all elements of the jurisdiction's optional energy- and resource-efficient code. The code was developed by Building Science Corporation in 1996 for use on a U.S. Department of Energy "Building America" project in Prairie Crossing, Illinois (go to the project web page at www.buildingscience.com/buildingamerica/casestudies/prairie_crossing.htm for more information). While some builders may find the all-or-nothing aspect of the code onerous, others—such as the Lake County Building Department– recognize the beauty of the total systems approach.

- LEED standards
- New county facilities construction
- "all or nothing" Optional code – builders can use non-compliant elements if uses all optional efficiency elements

SAN FRANCISCO

San Francisco passed an ordinance in May 2004 to alter the current environment code (chapter 7) to adopt and incorporate new provisions for green building design principals for City construction projects and to reconfigure the existing Resource Efficiency Building task Force. Chapter 7 of the Environment Code – Green Building Standards– requires all new municipal construction projects to achieve a LEED Silver or higher certification by USGBC.[1] The San Francisco Department of the Environment's (SFE) Green Building team oversees the environmental design and performance of all municipal construction projects, chairs the inter-departmental Resource Efficient Building Task Force, develops green building policy, guidelines, tools and training for City design professionals, initiates revisions to building codes to allow for high performance technologies, supports residential and commercial green building efforts, and collaborates with appropriate City departments to ensure that basic infrastructures are developed to support green building in the City.

DUBLIN

http://www.codepublishing.com/CA/Dublin/Dublin05/Dublin0561.html

In March 2004, Dublin city council passed an ordinance amending the municipal code by adding a new chapter mandating green building practices for city projects. The Green Building Compliance Official enforces this chapter and is designed by the city manager.

- All city projects initiated on or after March 16, 2004 with an estimated construction cost of $3M or greater must meet LEED silver rating (or city-approved equivalent) and registered and certified by USGBC.
- Ordinance also requires operation guidelines be proposed by the Green Building Compliance official.
- Includes possibility for waiver or severability of any part of ordinance.

LIVERMORE

http://www.ci.livermore.ca.us/minutes/2004/June282004Agenda.htm

In 2004, Livermore also passed an ordinance requiring city projects meet LEED standards.

- City projects initiated after the date of the ordinance shall meet LEED silver rating or city-approved equivalent. Similar to Dublin, the Green Building Compliance Official enforces compliance and all operations.
- Historic structures are exempt from requirements
- Waivers are possible

1. See City and County of San Francisco Municipal Code, Chapter 7, "Resource Efficiency Requirements."

RESOLUTIONS FOR GREEN BUILDING PROGRAMS/POLICIES

BERKELEY

http://www.ci.berkeley.ca.us/sustainable/

A 2003 resolution adopting a LEED building policy for city buildings:

- all covered projects that are city owned and operated projects and entering design and construction after January 1, 2004, be LEED certified.
- All projects entering design and construction after Jan 1, 2006 should meet a minimum LEED Silver rating.
- Historic city-sponsored projects or structures are exempt from, but encouraged to comply with the requirements
- Hardship exemption allowed with proof
- City manager determines if projects qualify and if project achieves LEED rating; if rating not achieved, must meet additional requirements
- LEED registration and certification through USGBC is not required but encouraged
- Encourages private and public sector non-covered projects to incorporate LEED rating system (includes UCB, Berkeley USC, Lawrence Berkeley National Labs)

PORTLAND

http://www.green-rated.org/uploaded_files/01_jan_gb_resolution.pdf

http://www.green-rated.org/uploaded_files/01_jan_gb_policy.pdf

Green building resolution & policy for city buildings approved January 10, 2001 by resolution.

- Includes all facility projects constructed, owned, managed or financed by the city; ongoing and future program reas (urban renewal areas and development loan/grant fund programs) and the constructions, operations and maintenance of public infrastructure that serves building development
- New construction and major retrofits should meet LEED certified level (encouraged to obtain highest level possible); also must be registered and certified by USGBC
- Applies to in-house projects as well contracted out projects, applies to design associated with procurement methods
- Includes exemption process
- Promotes voluntary application of green building guidelines in private sector building, design, construction and operation
- Cost benefit analysis to be conducted & implementation reports due annually

EUGENE, OR

Council adopted a resolution in 2000 calling for city departments to promote sustainable principles and to lead by example. In 2002, Facility management drafted a Sustainable Building Policy and expanded its green building program

- Policy requires all constructions, additions and/or remodels of over 5,000 gross square feet to achieve LEED certified level. A higher level should be sought where practicable.

SEATTLE

http://www.seattle.gov/sustainablebuilding/cityprojects.htm

Seattle's Sustainable Building Policy calls for all City-funded building projects with over 5,000 square feet of occupied space to achieve the Silver Level of the LEED (Leadership in Energy and Environmental Design) Rating System.

- All city departments and offices and their contractors are responsible for financing, planning, designing, developing, constructing and managing city-owned facilities and buildings
- City must finance, plan, design, construct, manage, renovate, maintain and decommission its facilities buildings to be sustainable
- Applies to new construction and major remodels
- LEED silver rating required for all facilities and buildings over 5,000 gross square feet of occupied space
- Awards given to those achieving higher LEED ratings
- Responsibilities: Directors of all City Departments involved in the planning, design, construction and renovation of city-owned facilities, Office of Environmental management, interdepartmental Green Building Team
- Capital construction falling under this policy expected to budget to meet LEED silver rating
- Training – city capital project managers will receive

AUSTIN

http://www.austinenergy.com/Energy%20Efficiency/Programs/Green%20Building/Resources/municipal.htm

The City of Austin implemented Green Building into their own facilities in 1993. In 1994, a resolution form City Council directed the creation of municipal guidelines. A committee of several City Departments as well as local AIA, CSI, and AGC representatives met to determine what all parties could agree to for this document. The Green Building Program, in cooperation with Department of Public Works and Transportation Architectural and Engineering Services personnel, and many others, developed the guidelines, with review and input from interested members of the Austin design and construction communities. Program does not seem mandatory.

COUNTY OF SAN MATEO

http://www.recycleworks.org/greenbuilding/sus_building_policy.html

The county adopted a Green Building Policy for new county building construction and additions to existing buildings and facilities.

- Only mandatory for buildings where the gross occupied area of the new construction is over 5,000 square feet.
- "encouraged to achieve certification at the highest practicable LEED rating level."
- County manager's office will convene a green building committee
- Department of Public works work with county departments
- Design and project management teams for new structures of less than 5000 square feet and all renovations or retrofits are encouraged to apply sustainable building practices, build to LEED standards, and to apply for LEED certification if practicable.
- Included in capital construction budget and should be in all future budget planning
- Training for capital project managers

SAN JOSE

http://www.sanjoseca.gov/esd/natural-energy-resources/greenbuilding.htm

In 2001, the city accepted a staff report on the Green Building Guidelines Recommendations and adopted the Green Building Policies as developed by the members of the community with the input of City Departments. The following policies and guidelines were developed with the input of the Green Building Workgroup, City Departments, the Planning Commission and the Mayor's Green Building Taskforce.

- All new construction and major retrofit projects for all City facilities and buildings over 10,000 gross square feet of occupied space shall meet a "San José LEED" Certified rating effective with the FY 02-03 Budget Allocations.
- Environmental Services Dept works with other city groups on green building

FRISCO, TX

http://www.ci.frisco.tx.us/uploadedFiles/Departments/Planning_Development/Environmental/CommercialGreenBuildingRequirements.pdf
http://www.friscotexas.gov/Chapter1_Snapshot_022305_HS.pdf (Comprehensive Plan, see page 71-72)

The City of Frisco approved, through an ordinance in 2001, a residential green building program and as May 18, 2004, established a Commercial Green Building evaluation period. Over the next year, the Planning Department is gathering data on commercial development in an effort to assess the feasibility of a mandatory Commercial Green Building Program and to educate the development community on the benefits of building in a sustainable manner. Below is a summary of the requirements of the ordinance:

Who: All non-single family development ? 10,000 square feet. What: Complete LEEDTM Checklist available @ www.usgbc.org/LEED/publications.asp. Provide documentation for estimated costs for points selected, estimated timeframe for cost recovery, and detailed explanation for points not selected. Checklist must be completed and documented by a LEED certified professional. When: To be submitted with Final Site Plan application from September 1, 2004 to September 1, 2005.

ORDINANCES FOR LOCAL HIRING POLICIES

COMPONENTS :

1. Referral Mechanism: A resident hiring policy with a first source program is likely to be most effective
2. Monitoring: which local government agency, and specific person, is responsible for monitoring
3. Enforcement: Termination of contract and debarment from receiving contracts up to 2-3 yrs is a common sanction. Fines and withholding payment are also common.

HARTFORD

Passed in 1986, the local hiring ordinance applies to all publicly assisted projects of 40,000 sq. ft. or more. For these projects, the ordinance says that:

- 40 percent of all trade project hours must be performed by city residents;
- 25 percent of all trade project hours must be performed by minorities and 6.9 percent must be performed by women;
- 1 in 5 workers must be apprentices, 50 percent of whom must be city residents;
- Permanent workforce after construction must be at least 50 percent resident and 45 percent minority; and
- 25 percent of city work is set aside for small and minority contractors.

Beyond these requirements, projects are eligible for reimbursement of their permitting fee (which is $16 per $1,000 of construction costs) if 50 percent of workers are residents and at least 25 percent of supplies come from Hartford businesses.
This ordinance includes a number of very progressive and strategic components. Requiring that the permanent, non-construction workforce maintain high levels of resident workers ensures a long-term impact for the community. Offering additional incentives to companies that hire more than the suggested percentage creates greater employment opportunities for local workers without imposing any new regulations or expectations on the businesses.

OAKLAND

Oakland adopted its local hiring ordinance in 1993, giving birth to the Local Construction Employment Referral Program (LCERP). LCERP requires that all Oakland Redevelopment Agency projects and all City of Oakland construction projects of $50,000 or more must hire Oakland residents for at least 50 percent of all work hours and for 50 percent of all new hires. These high mandatory set-asides are achieved through successful partnerships with 35 community based organizations (each serving diverse constituencies throughout the city), which work as outreach and referral agents, and the local union, which places qualified construction workers at publicly financed jobs. The community based organizations assess individuals and refer them to the local union hall. Participating businesses send requests to the hiring hall, and qualified local workers are dispatched to these job opportunities.

LCERP maintains a database of 2,637 workers and has placed 1,618 since July of 1993. It is an example of a local hiring policy that has effectively incorporated organized labor. This can have a large effect on residents served by the program: union construction workers in Oakland maintain an average annual income of $60,000.

Oakland also runs a "One Stop Capital Shop" - an agency that facilitates Oakland's $11 million Enhanced Enterprise Community Revolving Loan Fund. In accordance with Community Development Block Grant rules, companies participating in the loan fund must create at least one permanent full-time position for every $35,000 of loan funds they receive, and at least 51 percent of these jobs must be filled by low- to moderate-income residents of the Enhanced Enterprise Community. Unlike LCERP, these positions are all non-construction jobs. Between June 1997 and October 2001, this policy produced 690 new jobs, 57 percent of which were filled by Oakland residents.

PORTLAND

Portland's First Source Program (JobNet), initiated in 1978, was the first citywide effort in the U.S. to tie economic development incentives to preferential hiring of city residents. JobNet targeted the residents of Portland's North/Northeast and Outer Southeast neighborhoods - largely low-income communities of color.

JobNet required firms wishing to take advantage of economic incentives to sign a First Source Agreement. This agreement did not look identical for all firms, but did include some of the same requirements:

- make information on "covered positions" (as defined in individual contracts) available exclusively to JobNet;
- consider hiring from the pool of candidates referred by JobNet; and
- provide JobNet with quarterly summaries of its hiring activities.

These requirements were not overly burdensome, and JobNet achieved outstanding results, employing on average over 700 workers a year. Efficient delivery mechanisms and serious enforcement of good faith efforts were big parts of this success. If JobNet found that a firm had failed to exercise good faith efforts, it might sanction the firm by repealing tax abatements, recalling loans, or fining the firm $25,000 for every worker hired without a good faith effort. JobNet's first source agreements also included a unique piece of reciprocal accountability: firms could terminate the contract if JobNet failed to fulfill its end.
Starting in 1989, the Portland Development Commission (PDC) served as the central operating agency for JobNet, making subsidy decisions, job agreements, and job placements of residents all under one roof. It relied on up to 200 other agencies state-wide to facilitate recruitment and assessment of employees. The program, unfortunately, was recently consolidated into state-operated one-stop centers, and has lost much of its strength. The strategies JobNet used, however, are still valid and could be applied elsewhere.

LOCAL HIRING REQUIREMENT TEXT FROM LOS ANGELES MUNICIPAL CODE

SEC. 21.26. EMPOWERMENT ZONE - CITY BUSINESS TAX REDUCTIONS, LIMITATIONS, AND EXEMPTIONS.
(4) A newly established business in the business tax economic incentive area hires at least 50% of its workforce locally from the business tax economic incentive area, or the buffer zone.

OTHER RESOURCES

GREEN BUILDING MATRIX

http://www.planning.org/zoningpractice/pdf/ZPApr05Matrix.pdf
From April 2005 Zoning Practice "Building Green: Onus or Bonus?"

ORDINANCES AND SPECIFICATIONS FOR SUSTAINABLE DEVELOPMENT

Below is a link to information on codes, ordinances, and specifications published by governmental and non-governmental organizations that were selected as models for encouraging sustainable development and practices. Topics covered include fleets and fuels, high performance buildings, smart growth, sustainable purchasing, water, and other collections of model policies and tools.
http://www.ci.austin.tx.us/sustainable/sustcodes.htm

MODEL ORDINANCES FOR SUSTAINABLE DEVELOPMENT

http://www.mnplan.state.mn.us/pdf/2000/eqb/ModelOrdWhole.pdf
(pg 256-261 on pdf) – Brief sample of ordinance to promote a resource efficient building pilot program

GREEN BUILDING ORDINANCE MODELS:

http://www.stopwaste.org/home/index.asp?page=490

- Model Civic Green Building Ordinance
  This model ordinance only covers city sponsored projects, defined as any construction project primarily funded or sponsored by the city or on city-owned land.
- Model Green Building Resolution
  The model resolution can be adopted prior to adopting an ordinance, to encourage green building for public facilities, commercial and residential projects whenever feasible.
- Model General Plan Language
  This General Plan language can be adopted as part of a city's General Plan Amendment process, to ensure that all green building policies are consistent with the General Plan.
- Model Resolution to adopt Residential Green Building Guidelines as Reference Document
  A model resolution for cities to adopt the Alameda County Residential Green Building Guidelines as a voluntary City Reference Document.
- Jurisdictions with Green Building Ordinances

APPENDIX II: GLOSSARY

BIOMASS ENERGY – An organic matter, called biomass, is burned in an incinerator to produce energy. Solar Power Solar cells, which are made of silicon, convert the sun's energy into DC, or direct current, electricity.

CLIMATE CHANGE - A term used to refer to all forms of climatic inconsistency, but especially to a significant change from one prevailing climatic condition to another. In some cases, particularly in recent policy, "climate change" has been used synonymously with the term "global warming"

COAL - A fossil fuel formed by the breakdown of vegetable material trapped underground without access to air.

COMMISSIONING - An inspection process at the end of construction to ensure that the building system are operating optimally, according to plans, and according to the owner's needs.

RETRO-COMMISSIONING – Commissioning of existing buildings is the identification of necessary building maintenance improvements. It also includes implementing operational and maintenance improvements to ensure that the building is operating optimally. It does not substitute major repair work. Major repairs must be done before the retro-commissioning can begin.

EMISSION - Is the term used to describe the gases and particles which are put into the air or emitted by from some form of human activity (cooking, driving a car, etc). In the context of global climate change, they consist of greenhouse gases (e.g. the release of carbon dioxide during fuel combustion).

ENERGY CONSERVATION – Reducing energy use through practices. (e.g. Efficient building use practices like turning off lights in empty rooms, unplugging unnecessary lights, and using the AC/Heater wisely.)

ENERGY EFFICIENCY – Reducing energy use thorough design and technology without reducing the building user's comfort. For example: the use of energy efficient appliances, efficient lighting, efficient HVAC units, and efficient windows.

ENVIRONMENTAL JUSTICE – Fair treatment of communities ensuring equitable environment, equitable development, and equitable enforcement of laws, regulations, and policies regardless of race.

ENVIRONMENTAL RACISM – The concentration of environmental hazards in communities of color and the weak enforcement of environmental laws, regulations, and policies in communities of color.

FOSSIL FUELS –In the U.S., fossil fuels are our main source of energy. Fossil fuels are a non-renewable source of energy. Coal, Oil, and Natural Gas are all examples of fossil fuels.

GEOTHERMAL ENERGY - Geothermal energy is generated by converting hot water or steam from beneath the Earth's surface into electricity.

GREENHOUSE EMISSIONS – The waste gases given off by industrial and power plants, automobiles and other processes.

GREENHOUSE GASES – Gases that trap the heat of the sun in the earth's atmosphere, producing the greenhouse effect. The two major greenhouse gases are water vapor and carbon dioxide. Lesser greenhouse gases include; methane, ozone, chlorofluorocarbons, and nitrogen oxides.

GREEN JOBS – Employment in industries that use, produce or install sustainable materials (i.e. construction jobs in green building, solar panel installation, water efficient landscaping, etc.)

GREEN RETROFIT – A retrofit is the remodeling of an existing building to ensure safety and efficiency. Green retrofits of buildings conserve energy and water and are safer and healthier for its users and the environment.

GREEN OR SUSTAINABLE BUILDING - is the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition.

HEAT ISLAND AFFECT – Heat islands occur, in large part, because many buildings and paved surfaces are designed with dark materials that absorb heat from the sun. This heat is released at night, causing the air temperature to remain high. The resulting elevated temperature leads to an increased demand for air conditioning in buildings, increased fuel use for vehicle air conditioning, increased levels of smog, and associated increased levels of heat-related and smog-related health problems. Installing reflective roofs helps reduce the heat island effect, decreasing the amount of smog in the air and benefiting the entire community.

HYDROELECTRIC POWER PLANT – A power plant facility that uses moving water to power turbine generators that produces useable electricity.

INEFFICIENT BUILDINGS (SICK BUILDINGS) – Buildings that can affect the workers health as a result of CO_2 levels that are higher than normal.

NATURAL GAS – An odorless, colorless, tasteless, non-toxic clean-burning fossil fuel. It is usually found in fossil fuel deposits and used as a fuel.

NON-VOC PAINTS (VOLATILE ORGANIC COMPOUNDS) – Are paints that are made with low or no VOCs inside. Most conventional paints contained high levels of VOCs that produced a breathable gas when applied at room temperature.

NUCLEAR ENERGY – Energy that comes from splitting atoms of radioactive materials, such as uranium.

OIL – The raw material that petroleum products are made from. Gasoline and most plastics are made from oil.

RENEWABLE ENERGY – Sources of energy that can be continuously replenished. (e.g. wind power, solar power, geothermal, hydropower, and biomass.)

SOLAR POWER – energy from the sun that is converted into thermal or electrical energy. Solar power is often gathered by installing solar panels on roofs or on other exterior surfaces of buildings.

WIND ENERGY – Wind turbines (windmills) use wind to create electricity.

XERISCAPE – A landscaping method developed especially for arid and semiarid climates that utilize water conservation techniques such as the use of drought-tolerant plants, mulch and efficient irrigation systems.

STRATEGIC CONCEPTS IN ORGANIZING AND POLICY EDUCATION

The mission of Strategic Concepts in Organizing and Policy Education (SCOPE) is to reduce and eliminate structural barriers to social and economic opportunities for poor and economically disadvantaged communities. SCOPE pursues its mission by:

- Building models of increasing civic participation where poor and disadvantaged communities can become active participants in public policy-making and initiatives that impact their lives.
- Working to develop strategic alliances between diverse communities and constituencies that link local social and economic conditions with regional initiatives and economic and social agendas.
- Equipping poor and disadvantaged communities with the strategic research and analysis, educational tools and methodologies, and new technologies needed to understand the nature of structural economic problems and develop proactive responses, which address their issues and needs.
- Providing training and strategic facilitation to ally organizations, in order to build connections, relationships, and collaborations at multiple levels to enable poor and disadvantaged communities to respond to the challenges of regionalism and globalization.

LOS ANGELES APOLLO ALLIANCE

The Los Angeles Apollo Alliance is an alliance of labor unions, community-based organizations, environmentalists, and business leaders. The mission is to build a broad-based constituency in support of a sustainable, equitable and clean energy economy that will create quality jobs for low-income people of color, create healthier and safer communities, and promote community-based land use planning and economic development. Through policy alternatives, organizing, and on the ground results, we are demonstrating that a socially-just, environmentally-sustainable and economically-prosperous future is attainable.

The Apollo Alliance is a national effort to invest in clean energy technologies and infrastructure in ways that bring needed economic development to inner-city communities, improve the environment, and reinvigorate our economy. With the same spirit, vision, and urgency as President Kennedy's 1961 Apollo Mission to get a man on the moon, the Apollo Alliance is a strategic initiative working towards energy independence in one generation.

The Los Angeles Apollo Alliance promotes the following initiatives:

- Smart funding and investments for a cleaner tomorrow
- Clean and renewable energy development
- Green building and infrastructure
- Just and sustainable economic development
- Transparent and inclusive public policy decision-making

Community Institute for Policy Heuristics
Education and Research
(CIPHER)

Strategic Concepts in Organizing and Policy
Education
(SCOPE)

1715 W. Florence Avenue
Los Angeles, CA 90047
(323) 789-7920
www.scopela.org