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Building Green with Carrots & Sticks

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The fabled Three Little Pigs were probably the earliest recorded pioneers in the quest for sustainable buildings. If the “Big Bad Wolf” symbolizes environmental forces and non-renewable resources, then the tale becomes allegorical and apt. Through their building choices, the piggies demonstrate that survival requires hard work and wise choices.

Green building, also referred to as sustainable design, is a loosely defined collection of land use, building design, and construction strategies that reduce the environmental impacts of buildings on their surroundings, both as they are built and once they are built. Traditional building practices often overlook the interrelationships among a building, its components, its surroundings and its occupants. “Typical” buildings consume more of our resources than necessary and generate large amounts of waste.

Don’t worry. This paper is not intended to persuade you of the benefits of Green Building regulations. After all, we are city attorneys not policy makers. However, sure as you will soon need to determine whether an EIR is adequate only after it analyzes a project’s impact on global warming,¹ the likelihood is that, sooner or later, someone in your city will decide that a green building program should be put on the agenda. To help you keep up with the discussion, I have attached to this paper a glossary of green terms.² You will need it. This is an area of regulation particularly weighed down with acronyms and terms of art. Knowing the lingo helps demystify the proposed regulations. However, this paper will also not explore all the many green options available to lawmakers. Even if I tried to provide such an inventory, it would be growing obsolete while the paper was being copied. Green building is an area of rapid growth and innovation. Instead, this paper focuses on the legal issues that arise from a city’s desire to “go green” (or greener).

The First Legal Issue: Finding the Right Legal Foundation on Which to Build the Program

A city may impose mandatory green building regulations or develop incentive programs within three general frameworks: (1) by local amendments to the California Energy Code, (2) by local amendments to the California Building Code, or (3) through enactment of local zoning regulations. While specific regulations require independent analysis, each option presents certain legal considerations.

¹ Earlier this year, the Attorney General urged local officials to reject the Environmental Impact Report (EIR) for the Yuba Highlands development project because the EIR failed to address greenhouse gas emissions. The Attorney General asserted that this failure constituted a violation of the California Environmental Quality Act (CEQA). Yuba Highlands proposes 5,100 homes on 2,900 acres east of Beale Air Force Base and west of the Spenceville Wildlife Area.

² There are many glossaries of “green” terms available on the internet. The one attached to this paper is relatively comprehensive and will help keep you from losing track of the discussion. The Green Building Encyclopedia is a project initiated and developed by Elements Group Inc. © 2007.

California Energy Code. The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to consider new energy efficiency technologies and methods. These state standards are codified in the California Energy Code, which is part of the California Building Standards Code³ (CBSC). Cities must adopt the CBSC but may adopt local amendments to it. *See* Health & Safety Code §17958. A city may require more stringent energy efficiency standards on new construction, remodels and repairs, including more standards aimed at meeting green objectives. As with all amendments to the CBSC, the city must find that the proposed local amendments are reasonably necessary based on unique local climatic, geologic or topographic conditions. There are additional requirements applicable to amending the Energy Code. To adopt more stringent standards, a city must prepare a study with supporting analysis showing how the city determined that the local amendment would result in energy savings and demonstrating that the local standards will require buildings to be designed to consume no more energy than permitted by the current Energy Code. The local amendments must be cost effective and the city must also document its basis for determining that the standards are cost effective. *See* 24 Cal Code Regs. Section 10-106. Local energy efficiency standards must be approved by both the California Building Standards Commission and the California Energy Commission (CEC). Although considerable paperwork is involved in getting these amendments approved, CEC actively encourages cities to adopt more stringent energy efficiency requirements. Cities can expect CEC approval of reasonably supported local amendments. However, the Energy Code is undergoing revision currently and the revised code becomes effective in 2009. Accordingly, this may be an imprudent moment to amend the Energy Code, since its revision may affect the local amendment. A local energy code implementation could be adopted in coordination with the 2008 Title 24 codes (draft out in Fall 2007 and effective 2009).

Two or more years after filing with the California Energy Commission, any interested party may challenge local energy standards if there has been a substantial change in the factual circumstances supporting the cost effectiveness finding. If the governing body of the local agency determines that the standards are no longer cost effective, the standards become unenforceable on that date and cannot affect the issuance of a building permit or other entitlement. Public Resources Code §25402.1(h)(1).

Here is a good example of findings required to adopt a local amendment to the Energy Code:

³ Title 24 of the California Code of Regulations is known as the California Building Standards Code or sometimes just "Title 24." It contains the regulations that govern the construction of buildings in California. Title 24 is composed of 12 "parts." The California Energy Code is part 6 and is also known as the 2005 Energy Efficiency Standards.

Findings Pursuant to Public Resources Code section 25402.2 and Health and Safety Code sections 17958.5, 17958.7 and 18941.5. To the extent the requirements of this ordinance are deemed to constitute changes or modifications to the requirements of the California Building Standards Code and the other regulations adopted pursuant to Health and Safety Code section 17922, the Board of Supervisors expressly finds that the provisions of this ordinance are reasonably necessary because of local climatic, geological, or topographical conditions as follows. Marin County has three Title 24 climate zones and 24 microclimates. During periods when arctic masses dominate the weather, nighttime lows drop into the high twenties with daytime highs in the thirties. In climate zone three (Coastal and certain bay areas), fog is a consistent weather pattern that creates a demand for heating even during summer months. In addition, climatic conditions in Kentfield (Climate Zone 2), result in 2774 “heating degree days.” The Average Maximum temperature is over 80°F for the months of June, July, August and September, and during the summer it is not uncommon for temperatures to reach 100°F in some parts of Marin. Climatic conditions in Kentfield, (Climate Zone 2) result in 441 “cooling degree days”. The average house size in Marin is getting larger and using more energy. During the 1970s most home construction was approximately 1,500-2,500 square feet. In the years 1998 through 2001 average house size construction continued to rise to approximately 3,000 - 4,000 square feet. These large houses are using more energy and resources. Due to local climatic conditions and increasing house size, total residential energy consumption increased from 619 million kWh to 734 million kWh from 1995 to 2000. This 18.5% increase in energy use raises the per capita contribution of costly uncertain energy supplies, pollution, and global warming. Due to local climatic conditions, it is reasonably necessary to enhance the State of California energy code requirements for homes over 3,500 square feet.

Amendments to the Energy Code are suitable for those provisions of a green program that directly address energy performance standards. These findings from Marin County are in connection with the enhanced requirements for large homes. Santa Monica requires that all windows in new structures be double-glazed and meet a specific standard [low-emissivity glazing, with center-of-glass U-value not more than 0.32 Btu/(hr.sq.ft. deg. F.), and Solar Heat Gain Coefficient not more than 0.37]. Another example is found in Culver City’s recent amendment that requires new commercial and multifamily construction to install 1kw of solar photovoltaic power per each new 10,000 square feet of construction. Culver City’s code also provides that, if the geometry of the new project does not permit compliance with the requirement, the applicant may pay an equivalent amount into a city fund to pay for solar systems on city facilities or other local non-profit entities. Thus, one way or the other, energy efficiency is increased and the demand for offsite electricity reduced.

California Building Code. Uniform statewide building standards are generally specified by the Legislature. *See* Health & Safety Code §17922 [adoption of specific uniform building standards relating to construction dealing with everything from plumbing to fire safety incorporated into state law]. The CBSC is a compilation of these building standards and is binding on the state and other public agencies, including private parties and entities. *See* Health & Safety Code §18944.5. The CBSC must be published in its entirety once every three years, with supplements in other years as necessary. *See* Health & Safety Code §18942(a). Once published, if not adopted sooner, the CBSC takes effect at the local level 180 days thereafter. *See* Health & Safety Code §17958. “There is a statewide interest in uniform building codes and the field has therefore been preempted by state law, subject to a statutory exception which permits a local entity to modify the provisions of the California Building Standards Code when it determines, and expressly finds, that such changes are reasonably necessary because of local climatic, geological or topographical conditions. [Citations.]” *ABS Institute v. City of Lancaster* (1994) 24 Cal.App.4th 285, 293; *See* Health & Safety Code §18941.5(b).

A city may adopt local amendments to the California Building Code, which is also part of the CBSC. Cities may amend the California Building Code to require green building measures (perhaps requiring certain types of building materials in new construction). The California Building Standards Commission permits amendment only if the amendments are reasonably necessary because of unique local climatic, geologic or topographic conditions. Health & Safety Code §17958.5(a). Findings of local conditions and the adopted local administrative regulations must be filed with the California Building Standards Commission to become effective and may not be effective sooner than the effective date of the current edition of the CBSC. The CBSC is amended every three years and a city must re-adopt local amendments with each revised CBSC. Local administrative regulations adopted to be applicable to previous editions of the CBSC do not apply to the current edition without appropriate adoption and the required filing.

Amendments to the Building Code are suitable for those provisions of a green program that regulate types of building materials and methods. For example, local ordinances may require use of specified amounts of recycled building materials. Malibu adopted extensive amendments to the plumbing code to require tertiary treated water in connection with all new on-site wastewater treatment systems.

Zoning Ordinance. Land use regulations may be constructed on the strong foundation of a city’s police powers to protect the public health, safety and welfare of its residents. *See* Cal. Const. art. XI, §7. A city’s police power can support any land use regulation that is reasonably related to the public welfare. *Associated Home Builders, Inc. v. City of Livermore* (1976) 18 Cal. 582; *Metromedia, Inc. v. City of San Diego* (1980) 26 Cal.3d 848, 861. A city may enact green building regulations within its zoning ordinance as long as the regulations do not conflict with state law, are not impermissibly discriminatory, and are neither arbitrary nor capricious.

Amendments to the Zoning Code are suitable for those provisions of a green program that offer incentives [for example, additional height, density, reduced processing fees or expedited permit processing] for those projects that incorporate green elements into the project design and construction. Many ordinances also require an applicant make choices that result in a minimum number of “points” or reach a minimum level of LEED® certification. The United States Green Building Council’s Leadership in Energy and Environmental Design (LEED®) Green Building Rating System program is widely recognized and used by cities as a way to measure the “greenness” of a project. To earn certification, a building project must meet certain prerequisites and performance benchmarks ("credits") within five categories of performance: Sustainable Sites, Energy and Atmosphere, Water Efficiency, Indoor Environmental Quality, Materials and Resources. Within each of these credit areas a project can earn a certain amount of points. Projects can earn additional points under an Innovation in Design category, through demonstrating exceptional performance above LEED® requirements. The number of points the project earns determines the level of LEED® Certification the project receives. Projects may be awarded Certified, Silver, Gold, or Platinum certification.

The Second Legal Issue: Determining Whether to Build the Program with Incentives or Mandates or a Hybrid

As discussed above, an ordinance mandating green elements need only be reasonably related to the public welfare in order to be a valid exercise of the city’s police powers. I promised at the beginning of this paper that this discussion would not devolve into all the statistics and reports that support the need for green buildings. However, to the extent that as a city attorney you want to assure yourself that such ordinances will pass muster, the internet is full of sites devoted to this topic. The U.S. Green Building Council (home of LEED®) is www.usbc.org and a good place to start.

It is well-documented that development and construction practices have a major impact on the environment and community health. The construction and maintenance of buildings is responsible for 40% of US energy use, and 30% of wood and raw materials use. Better building practices can significantly reduce these impacts while, at the same time, reducing lifetime operating costs. This saves money and reduces burdens on local infrastructure, and increases the health of our living environment.

Green building programs provide a tool to inform design and construction decision-making. A “green” building can be defined as one that is sited, designed, constructed, operated and maintained in a manner that minimizes some or all of the impacts on the environment reasonable anticipated if it were to be built and operated according to typical, modern industry practices. Green building regulations promote the health and well-being of the occupants. These sustainable practices allow cities to meet the needs of the present, without compromising future generations. Additional information supporting the need for and benefits of green building and describing basic green building practices can be found in the attached brochure entitled Developing Green Building Programs – A Step by Step Guide for Local Governments (produced by Global Green USA).

Green buildings generally have more comfortable and healthier indoor conditions. For homeowners, this quality of life increase tends to justify the investment; studies have documented better resale values and satisfaction among “green” homeowners. For commercial building owners, increases in productivity can easily total more than a project’s entire construction cost over the lifetime of the building.

Green building products and professional services are increasingly available in the California market and demand is growing. This pressure has significantly helped to reduce the costs and to increase the variety available. Nationwide there has been a spread of interest and utilization of green building practices among producers and consumers. It has become common to find articles in newspapers, popular and trade magazines, and to see services and products marketed to this growing interest. Cities, small and large, have also developed green building programs for public and private development. The cities of Boston and Washington DC recently adopted green building regulations, and the city of Santa Monica has been working with them for many years. Throughout the paper I have mentioned others and all of the cities mentioned (as well as many others not mentioned) have information available on the internet about their specific programs. As one example, the Ordinance adopting West Hollywood’s program is attached.

Compulsory but simple. The City of Calabasas’ ordinance is typical of the popular choice of simply requiring LEED[®] certification. The City adopted a specific version of LEED[®] (2.0) and designated that the Calabasas-LEED standard. For buildings up to 5000 square feet Calabasas requires the project to achieve “certified,” the lowest level rating under LEED[®] and buildings over 5000 square feet must achieve a “silver” rating.

Lawyers Generally Don’t Fear Voluntary Programs. Build It Green guidelines are a set of voluntary measures and practices for sustainable home construction. The City of Rancho Palos Verdes decided to use Build It Green, a suite of products and services which consists of guidelines and a rating system upon which to base its green building program. RPV concluded that the LEED[®] system’s focus on industrial, office and commercial design was less useful in the predominately residential community of RPV. RPV’s ordinance is typical of the ordinances designed to educate and encourage, but compliance with the green standards is not mandatory. For example, created New Home and Multifamily GreenPoint Checklists and required new homes to achieve 50 points or higher to receive Build It Green certification with minimum points from each following category: Energy (11), Indoor Air Quality/Health (5), Resources (6), and Water (3); and meet the prerequisites of 50 percent construction waste diversion and incorporation of the GreenPoint checklist into submitted plans. Under the multifamily home checklist, these buildings have an addition requirement of a minimum of six (6) points within the Community category. Both checklists allow for incorporation of Community Design Measures, which are outlined in the respective Guidelines, or RPV can identify selected green features that address unique local priorities. As an incentive to builders and homeowners to construct green buildings, new buildings that meet the

minimum point value of 50 points would qualify for expedited plan review through RPV's Planning and Building Departments and/or reduced application fees.

Once the construction process is complete for projects that opt to attain a Build It Green certification, new single-family and multifamily homes are then verified by Build It Green certified raters to ensure that the project meets the GreenPoint Rated standards; thus, earning the right to bear the program's label. The label also provides a numerical score, which allows future buyers of the home to evaluate and compare the environmental performance of the individual home.

The Hybrid Green Ordinance: Carrots & Sticks. West Hollywood's Green Building Program was initiated with the intent to be innovative and achieve results. Naturally, that means that there was a citizen's "Green Ribbon Committee," planning commission hearings, consultants and the whole project was over two years in the making. The West Hollywood program was developed in two phases. In Phase One the City 1) consolidated and amended its existing green requirements and 2) required public buildings to achieve a LEED Certified rating (Leed/Lead by example). Phase Two consisted of establishing a mandatory green building point system for private development and incentives for high-achieving projects. West Hollywood's program provides a good example of a comprehensive ordinance with both mandatory and incentive-based components.

West Hollywood's Green Building Program for Private Development consists of two main components. The first component includes the addition of new, green general development standards that will apply to all development, including remodels and tenant improvements, and the second component applies to projects building new structures.

The Green General Development Standards relate to the following:

- Construction and demolition waste diversion;
- Storm drain public education;
- Accommodating for the future installation of photovoltaic systems;
- Managing construction air quality;
- Promoting healthier indoor air quality through the use of low VOC interior paints and wood finishes;
- Increasing energy efficiency through the use of energy star appliances; and
- Promoting the use of alternative transportation through the inclusion of bicycle parking in residential projects.

These new requirements apply to all projects: remodels, tenant improvements, additions, and new construction. Thus, all projects incorporate basic and simple green building measures that are practical and achievable.

West Hollywood's Green Building Point System applies to all new commercial development projects and all new residential development projects with three or more units. The point system is tailored to specifically address West Hollywood development

while providing flexibility that allows users to select the most appropriate green building elements for their projects. Specifically, the point system was designed to do as follows:

- Emphasize locally-available materials
- Apply to urban infill projects
- Address development trends in West Hollywood;
- Align thresholds for compliance with existing thresholds found in the Zoning Ordinance;
- Encourage green elements to be incorporated early into project design;
- Not create an increase in costs for project submittal and review;
- Not create an increase in the amount of time for application review;
- Provide flexibility to alter green elements as the project evolves;
- Fit within existing staff review of development proposals; and
- Involve all City Divisions that review development proposals in the program structuring.

The point system is divided into twelve categories that address different phases and parts of the construction process including: site, natural heating and cooling, foundation, structural frame, plumbing, insulation, energy efficiency and renewable energy, indoor air quality, roofing, exterior finish, and resource efficient materials. In addition, five percent of the points offered in the point system can be awarded as innovation points to be awarded for innovative technologies that are not identified in the point system.

A total of 160 points are available, of which new development projects (excluding single family dwellings and duplexes) would be required to earn 60 points, or 37.5% of the total number of points available. As an alternative, the program would offer an exemption from the West Hollywood green building point system for individual applicants who prefer to use the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System program.

This program is designed so that the more aggressive standards are applied to new construction. From a legal perspective, one concern of a program is that its benefits outweigh its costs. Regulations that deprive a property of all economic value may result in an unconstitutional taking. While it is unlikely that any one regulation would have such an effect under the typical green building programs currently being implemented, the totality of the regulations should be monitored. In West Hollywood, the City offers the alternative of following the well-established LEED program as well. Options tend to avoid "takings" claims.

West Hollywood also developed incentives to encourage and reward projects of exemplary green design. A high-achieving project within the point system is defined as having 90 or more points, a 50% increase over the required compliance threshold.

A project exceeding this threshold could select one of the following incentives:

1. One additional residential unit not to exceed 700 square feet without additional required parking.

2. Increase buildable square footage by allowing required common open space to be provided on the roof versus the ground level if the project includes a vegetated green roof.
3. Flexibility in fulfilling the open space standards.
4. In multi-family residential projects, the area in the side setbacks may be used to satisfy common and/or private open space requirements.
5. Commercial or mixed-use projects may obtain a 0.1 FAR increase.
6. Reduced restaurant parking requirement for up to 2,400 square feet of restaurant area.
7. Projects may obtain expedited permit processing for Building & Safety Division permits. Additionally, projects shall benefit from preferential Planning Commission scheduling where feasible.
8. Commercially-zoned lots which are 40 feet or less in width and which have alley access may receive a 50% reduction in required parking spaces.

Some aspects of the incentive program were controversial. For example, some people questioned the wisdom of the parking reduction granted to small restaurant tenant spaces in a city where parking is in short supply. Another concern was raised about potential noise impacts to surrounding properties for residential projects that would be permitted to provide 100% of their common open space on the roof level and for projects that would be allowed to meet open space requirements in the side setbacks.

Ultimately, these issues are policy questions involving assigning weight to competing interests. As a legal matter, as long as reasonable use can be made of a property without the incentive, voluntary incentives are a permissible way of encouraging compliance with standards more rigorous than are required of others.

In order to be eligible for any of the incentives described above, in West Hollywood a project would need to achieve 50% more points within the Green Building Point System than is required for minimum compliance. While there are multiple strategies for achieving additional points, it is likely that this exemplary effort will result in increased project costs. The above list of incentives would help to offset the increased costs associated with becoming an exemplary green project. In addition, it provides motivation for projects to make choices that increase the quality of life and health of residents, and which promote sustainability.

Note on Building Flexibility into the Program. Whether regulations are part of the Energy, Building or Zoning code, the program will inevitably need to be reevaluated. Here is a case in point. Santa Monica's green building ordinance required applicants to choose four major construction materials with recycled content from a limited list compiled by the U.S. Environmental Protection Agency to the exclusion of other building

materials and systems that might result in a more environmentally responsible and healthier building. For example, one of the common recycled materials selected by builders is recycled, reprocessed paint. This paint may not be available in low or zero voc (volatile organic compounds) types, thereby eliminating the opportunity to encourage the use of paints that do not contribute to indoor air pollution. The City ultimately expanded the options available to applicants to include a broader choice of ten materials or other building systems of which five must be selected.

In addition to periodic reviews of the program, cities may want to consider developing discretionary permits for novel, experimental or demonstration projects that incorporate materials, design, technology or building methods not considered when the green program was adopted.

- HOW TO GET STARTED -

1. Inventory existing city policies and programs, identify relationship to green building components, identify gaps.
2. Conduct outreach with key city and private-sector stakeholders
3. Determine the program focus (public, residential, commercial, industrial uses)
4. Develop a program implementation plan, taking advantage of LEED rating system, Build It Green or other similar system.
5. Establish incentives and create program marketing materials
6. Provide training for city staff, local designers, and builders
7. Green an upcoming municipal project to build community interest and support for the program.

- WHY TO GET STARTED -

“Then I say the earth belongs to each...generation during its course, fully and in its own right, no generation can contract debts greater than may be paid during the course of its own existence.”

-Thomas Jefferson, September 6, 1798