

## **PART 1 OVERVIEW OF GREEN BUILDING**

The antecedents to green building can be traced back decades to progressive communities that instituted recycling programs, energy and water conservation, and drought resistant native landscaping. The environmental movement of the '60s raised awareness of habitat and pollution. The California Environmental Quality Act in the '70s required environmental data gathering and analysis prior to approval of development projects. Wind and solar energy projects began to be developed on a large scale in the '90s. In 2004 Governor Schwarzenegger signed an executive order that established the State of California's priority for energy and resource-efficient high performance state buildings. In 2006 the Governor signed the Global Warming Solutions Act of 2006, which requires that by 2020 the state's greenhouse gas emissions need to be reduced to 1990 levels. Local jurisdictions will be required to report and verify GHG emission levels and begin reducing them by 2012. New legislation and other efforts such as those proposed by the Attorney General may move up implementation through CEQA and new legislation may be passed. The following lists typical stakeholders and how they benefit from green building.

### **Government**

- Increase economic development and community vitality
- Improve the jurisdiction's reputation
- Add value to the local built environment
- Increase citizen satisfaction and retention
- Enhance public health and safety
- Improve environmental compliance
- Promote interdepartmental cooperation
- Develop positive relationships with the building industry
- Comply with state requirements

### **Construction Industry**

- Gain competitive marketing edge
- Provide higher quality, higher value product
- Build positive relationships with government
- Reduce legal exposure
- Improve image
- Reduce callbacks
- Increase customer satisfaction

### **Building Owners**

- Lower operating costs
- Provide higher quality, higher value product

- Reduce legal exposure
- Increase property value
- Improve resale potential

#### Home Owners

- Lower operating costs
- Provide healthy, productive indoor environment
- Increase property value
- Increase resale potential
- Increase pride of ownership

#### Building Occupants

- Lower operating costs
- Live in a healthier indoor environment
- Enjoy a higher quality of life
- Be a steward of the environment

#### Affordable Housing Agencies and Nonprofits

- Provide housing that is truly affordable
- Create sustainable communities
- Support environmental equity
- Reduce impacts

#### Utility

- Reduce peak electrical loads
- Reduce emissions
- Get recognition as environmental stewards
- Meet utility restructuring requirements
- Reduce resource consumption
- Reduce stormwater runoff
- Enhance water quality
- Lower energy use for water pumping/processing

Those organizations that have been addressing energy and other resource issues over the years are offering their experience and expertise to agencies ready to move forward. It is part of Build It Green's mission to assist local governments in the promotion of green building.

## **SECTION 1 INTRODUCTION TO GREEN BUILDING**

Green building is the practice of increasing the efficiency of buildings in the use of energy, water and materials which reduce impacts on human health and the environment, through better siting, design, construction, operation, maintenance and removal. Green building also seeks to enhance livable communities through the design of neighborhoods encouraging mixed use, infill, transit, bikeways, clustering, open space, and habitat preservation. There are many ways to approach the challenge of green building.

Build It Green's approach to green building has evolved over several years through collaboration with governments, utilities, builders, architects, product manufactures and retailers, green professionals, and environmental organizations. Councils and guilds have been formed to provide new information and a sounding board for ideas and proposals. Build It Green's guidelines and GreenPoint Rated program have been developed through collaboration and innovation.

The success of Build It Green is due in part to its multifaceted approach encompassing identification of green products and materials, green construction professionals, green developers, consumer education, and government policy development.

In practical terms, Build It Green offers a whole-systems approach to building that includes these concepts:

- Designing for livable communities
- Using sun and site to the building's advantage for natural heating, cooling, and daylighting
- Landscaping with native, drought-resistant plants and water-efficient practices
- Building quality, durable structures
- Reducing and recycling construction and demolition waste
- Insulating well and ventilating appropriately
- Incorporating durable, salvaged recycled, and sustainably harvested materials
- Using healthy products and building practices
- Using energy efficient and water saving appliances, fixtures and technologies

When implemented holistically, these strategies serve to preserve our environment for future generations by conserving natural resources and protecting air and water quality. They provide benefits for us today by increasing comfort and well-being and helping to maintain healthy air quality. Finally, green building strategies are good for everyone's pocketbook, minimizing maintenance

and replacement requirements, reducing utility bills and lowering the cost of home ownership, and increasing property and resale values.

Green buildings are sited, designed, constructed, and operated to enhance the well-being of their occupants and support a healthy community and natural environment.

### **Build It Green Efforts for Local Government**

Build It Green provides strategic assistance to local governments for developing, promoting, and implementing their green building policies and programs.

As awareness increases among state and local government agencies about the economic, health, environmental, and social benefits of green building, a corresponding need arises for effective green building policies that state and local agencies can embrace and promote to their constituents. Build It Green works at the state and local level to establish credible, effective policies and programs that will provide the foundation for green building to become standard practice.

The programs Build It Green promotes are:

- **Complementary and Consistent.** Build It Green guidelines, policies and programs are crafted to be consistent and complementary with California energy and water utility programs, building and energy codes, greenhouse gas legislation, and reputable national green building programs such as ENERGY STAR and LEED
- **Evolving.** Build It Green adapts to changes in requirements, technology, and innovation.
- **Comprehensive.** Build It Green promotes policies that provide credible minimum thresholds for all categories of green building, including energy, water, indoor air quality/health and natural resources.
- **Inclusive and Transparent.** Build It Green develops guidelines and policies in a nonadversarial, open process with all interested stakeholders included.
- **Flexible.** The policies Build It Green recommends are flexible enough to be adapted to regional needs and contexts without weakening their integrity.

Build It Green has developed an Implementation Toolkit to help local governments adopt green building policies. Build It Green staff works with local government staff and officials to help them take advantage of all the resources in the Toolkit found in Appendix A.

- Public Agency Implementation Toolkit (Model Policies, Staff Reports, Presentations for staff to use)

- Training for local government officials, policy makers, and staff
- Communicating with the state and other agencies on issues and trends affecting green building
- Benchmarking and tracking local government policies, programs, and incentives to tap into emerging best practices and avoid reinventing the wheel
- Policy workshops with Boards, Commissions, City Councils and agency staff
- Green Product Directory (online supplier/service provider directories)
- Establishing and supporting Public Agency Councils (PAC) in priority regions around the state

### **Levels of Local Government Involvement with Build It Green**

The following represent the levels of involvement with Build It Green:

1. Public Information. Jurisdiction receives information from Build It Green and makes it available to the public at the counter
2. Membership. This provides recognition of support for Build It Green and access to a broad range of information and discounts.
3. Use Voluntary Guidelines or Checklist. Jurisdiction supports the use of the checklist to promote green building awareness and education.
4. Adopt Guidelines. Jurisdiction adopts Build It Green guidelines to establish a credible and consistent definition of residential green building in the community.
5. Adopt Checklist. Jurisdiction adopts GreenPoint Rated checklist to be reviewed for each application.
6. Third Party rating programs. The most effective way to foster green building is to encourage the private sector to participate in third-party rating programs, which set quantifiable standards for what green means. A rating program helps builders benchmark their internal progress as they expand their green building expertise.
7. GreenPoint Rated. Jurisdiction requires third party rating within the Build It Green, GreenPoint Rated program. Programs may be voluntary or mandatory depending on the location in the California, and the intent of the local jurisdiction. With the support of the Home Builders Association of Northern California, the Bay Area is moving toward mandatory programs.
8. Tracking green building activity and resource savings. GreenPoint Rating and third party verification enables cities to track local green building activity, and gives building owners and tenant's assurance that they're actually getting healthier, more environmentally responsible buildings. Climate/Resource Calculator has been developed to track resource savings from Green Point Rated residences and quantify them on a community basis to respond to green house gas reductions.

### **GreenPoint Rating**

This is a program that uses a checklist with a broad range of categories that address planning and design, site activity, structure features, system selection, finishes and furnishings, and other actions. The program is a point-based system. Points are assigned to green features found in a new home, multifamily structure or an existing home. The intent of the effort is to establish a highly visible program and label to distinguish green homes from conventional homes and to foster positive interactions between GreenPoint Raters and building professionals. Implementation of the program consists of the following actions:

- Establish a checklist of applicable categories and assign points to green features
- Provide training and certification for raters and building professionals
- Maintain a list of approved GreenPoint Raters
- Maintain forms, templates, guidebooks, and other resources necessary for program implementation
- Maintain tracking system that documents program activities and results, including participating projects, raters, builders, contractors, lenders, realtors, and other stakeholders
- Facilitate coordination and information exchange between various stakeholders
- Implement quality assurance procedures to verify quality and consistency of rating results
- Review rater reports and supporting documentation and issue project rating certificates
- Coordinate local consumer education and cooperative advertising with regional campaigns
- Update guidelines and checklists in response to changes in state and federal requirements, innovations in green products and construction methods, and to address feedback from builders, suppliers, consumers, and local government.

### **GreenPoint Rating for New and Multifamily Homes**

Green Point Rated is a comprehensive residential green rating program for new single family and multifamily and remodeling in five categories – Energy Efficiency, Resource Conservation, Indoor Air Quality, Water Conservation and Community Livability. Any eligible project that achieves the minimum of 50 total points and meets category specific thresholds earns the right to bear the GreenPoint Rated label.

### **GreenPoint Rated Existing Homes**

GreenPoint Rated Existing Home is the first comprehensive existing home rating program in the nation. It is designed to provide an accessible entry

point to gaining a green rating for the home and also to reward comprehensive improvements.

Build It Green developed the Home Remodeling Green Building Guidelines as a set of best practices for homeowners wishing to pursue a remodel. The GreenPoint Rated Existing Home checklist builds on these guidelines by setting specific thresholds to encourage improvements such as installing efficient appliances, lighting, and plumbing fixtures, improving indoor air quality, and encouraging the use of durable, high-quality materials.

Most home remodels involve sections of the home, not addressing the entire home at one time. Depending on a home's current energy performance and the extent of green home improvements, it will receive either an Elements or Whole House consumer label. An Elements label is provided to homes that meet basic requirements in four environmental categories and are on track to make additional improvements over time. A Whole House label is awarded to homes that meet more extensive requirements and have made comprehensive green improvements.

The requirements for an Elements label include:

- An energy survey to determine possible cost effective energy upgrades
- Visual evaluation of the HVAC system
- Passing an inspection for plumbing leaks
- Passing a back-draft safety test
- Recycling during any remodeling project
- Obtaining 25 minimum points and point thresholds for energy efficiency (8 pts), indoor air quality (2 pts), resource conservation (2 pts) and water conservation (4 pts)

The requirements for the Whole House label include:

- An energy evaluation, including home performance testing
- Passing eleven basic health and safety and systems integrity requirements
- Recycling during any remodeling project
- Obtaining 50 minimum points and point thresholds for energy efficiency (20 pts), indoor air quality (5 pts), resource conservation (6 pts) and water conservation (8 pts)(Link)

## **Green Point Raters**

GreenPoint Raters are fully trained to provide the third-party verification services necessary to document the green features and associated environmental benefits of a green building project. Thus local governments are able to implement local policies and incentive mechanisms without further burdening plan checkers and building inspectors to ensure compliance. Rater candidates must demonstrate prior professional experience and successfully complete a rigorous four-day training program. Raters are examined in both plan review and field inspection exercises. Raters must complete continuing education requirements to maintain their certification. Build It Green offers a number of continuing education opportunities and provides an ongoing support mechanism through the Rater Council. Build It Green also conducts periodic quality assurance activities to ensure high-quality and consistent verification results.

## **Benefits of Green Point Rated to Local Government**

This is a program that can be easily administered by Building and Planning Departments when third party raters are used. Staff should attend training to understand terminology and the difference between standard administration of codes and the added layer of green building. Build It Green seeks to be a step ahead of building codes and thus incrementally raise code requirements. A clear example applies to Title 24, Part 6. GreenPoint Rated requires that energy performance be at least 15% more efficient than Title 24. Since Title 24 is updated to higher stringency periodically, a jurisdiction that adopts GreenPoint Rated will remain consistently ahead of California's building code.

GreenPoint Rated seeks to be reliable, practical and flexible. There are few threshold requirements with greater emphasis on choice. There is a growing understanding of the process and the number of raters is increasing. The biggest advantage to local government is the tracking system and climate calculator.

## **Benefits of Tracking Green Buildings and Using the Climate Calculator.**

By adopting and implementing the GreenPoint Rated program, local governments have the opportunity to track residential green development in their community as well as qualify and report out on the associated environmental benefits. Build It Green's comprehensive web-based, tracking system and climate calculator, contains GreenPoint Rated and LEED for Homes projects in California.

A key component of the tracking system will be to track and report environmental benefits attributable to GreenPoint Rated and LEED homes, including avoided greenhouse gas (GHG) emissions, energy efficiency, water conservation, resource conservation, and solid waste reduction. The system

will incorporate algorithms for documenting the reduction in GHG emissions from green building measures.

These algorithms incorporate input from ICLEI, California Climate Action Registry, California Air Resources Board, California Energy Commission, and other key stakeholders to ensure consistency with broader climate change policies and initiatives. The Climate Calculator enables quantification of environmental benefits attributable to specific measures incorporated into individual GreenPoint Rated and LEED homes, a level of detail and specificity unavailable through other climate calculators. Thus the Calculator permits accurate program-level quantification of GreenPoint Rated and LEED Home benefits for the first time. This will become increasingly important as the information necessary to satisfy CEQA and Global Warming Solutions Act of 2006 increase.

### **Other Certification Programs**

In addition to GreenPoint Rated, there are other green building certification programs and standards that are utilized in California.

### **LEED Certified**

LEED Certification requires third party verification and accumulation of sufficient points for the category. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED. LEED provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources. [LEED standards](#) currently available are:

- [LEED for New Construction](#) (for commercial and institutional projects)
- [LEED for Existing Buildings](#)
- LEED for Existing Buildings: Operations and Maintenance
- [LEED for Commercial Interiors](#) (for the tenant improvement market)
- [LEED for Core and Shell](#) (for new core and shell construction)
- LEED for Schools

LEED for Homes is a rating system that promotes the design and construction of high-performance green homes, including affordable housing, mass-production homes, custom designs, stand-alone single-family homes, duplexes and townhouses, suburban low-rise apartments, urban high-rise apartments and condominiums and lofts in historic buildings. LEED for

homes is aimed at performance of the top 25% of new homes. LEED certification will also produce GreenPoint Rated certification.

#### **4. California Green Builder**

This is a program for a production home builder who builds at least 85 homes a year or builds subdivisions with master plan approval for their building permits. The program is pass fail and does not utilize points. The CGB program coordinator reviews submitted materials for accuracy and verifies compliance with CGB requirements. Upon approval Building Industry Institute (BII) shall designate the project as "CGB Applicant" pending final inspections of the subdivision. After reviewing project documentation, Builder is entitled to use the California Green Builder Logo and to designate the project as a California Green Builder subdivision or community. The Building Industry Institute shall randomly inspect homes to see that CGB Requirements have been met. HERS raters verify compliance.

#### **5. California Building Standards Commission**

On Thursday July 17, 2008 the Building Standards Commission adopted a green building code to promote healthy, energy, and resource efficient building practices throughout California. Build It Green applauds the efforts of the Building Standards Commission, the Department of Housing and Community Development, and the Governor for their leadership in developing green building codes.

#### **BSC Relationship to Local Government Green Building Policies**

The new California Green Building Standards Code addresses all building types; however, it treats homes and commercial buildings very differently. All of the proposed measures in the new code will be voluntary until 2011, but only residential will have a short list of mandatory requirements at that time. The commercial section consists of a longer list of measures that are voluntary and are not slated to become mandatory. The code is meant to set the minimum floor and does not preempt local governments to go above and beyond as per the Building Standards Commission intent language below.

“101.7 It is the intent of the California Building Standards Commission, by adopting this code, to set minimum Green Building Standards that may, at the discretion of any local government entity, be applied. It is the further intent of the California Building Standards Commission that all entities subject to this code view these standards as minimal Green Building Standards and that local government entities retain their discretion to exceed the standards established by this code.”

“101.3 It is not the intent of the California Building Standards Commission that this code substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission.”

## **Voluntary and Mandatory Sections in the Ca. Green Building Standards Code**

A unique aspect of the new code is that most of the stated best design and construction practices are voluntary. Over time some of these voluntary practices will likely become mandatory but that will be several years away. The voluntary practices serve to educate and raise awareness of options available as per the Building Standards Commission intent language below.

“Appendix A: A101.1 Scope. The measures contained in this appendix are not mandatory and provide additional considerations that designers, builders, and property owners may wish to consider during the planning, design and construction process. The standards in this appendix will continue to be developed through the next code adoption cycle for placement in the body of this code.”

“503.2 Minimum energy performance for low-rise residential buildings. Low-rise residential buildings shall meet or exceed the minimum standard design required by the California Energy Code currently in effect.”

“503.1 and A501.1 For the purposes of energy efficiency standards in this code the California Energy Commission will continue to adopt mandatory building standards. It is the intent of this code to encourage green buildings to achieve exemplary performance in the area of energy efficiency. Specifically, a green building should achieve more than a 15% reduction in energy usage when compared to the State’s mandatory energy efficiency standards.”

The code is not a substitute for GreenPoint Rated or LEED for Homes. It offers a low threshold compared to LEED Certified or a 50 point GreenPoint Rated. While the Building Standards Code recommends 15% above Title 24, the code maintains the standard in effect at the time.

Build It Green supports this code and will continue to work with and support local governments in creating credible and accessible green building policies and programs that exceed the new green building code. The state of California has taken an important step and Build It Green looks forward to coordinating and working with the Building Standards Commission, the Department of Housing and Community Development,

and the Governor to evolve the code over time and help improve the quality of life for all Californians.

Build It Green will continue to monitor actions taken by the Building Standards Commission, the California Energy Commission, the Air Resources Board, and any other state agencies who may affect green building.

## **SECTION 2: ROLE OF BUILD IT GREEN**

Build It Green is a professional non-profit membership organization that was established in 2003 with the mission to promote healthy, energy-and resource-efficient building in California through outreach and education. With this solid foundation, Build It Green has become the trusted resource for green building advocates and practitioners, statewide. Build It Green offers green building training, tools, and technical expertise to building industry professionals, homeowners, and other stakeholders.

### **Interact with Government**

Build It Green works both on the state and local levels. On the state level Build It Green has participated in the development of legislation, in the development state guidelines and standards, and as a consulting expert on green building. Build It Green will continue to take a leading role in developing state green building guidelines and standards, and to build strategic relationships with key policy makers and opinion leaders and partner with resource management agencies. On the local level Build It Green works with individual jurisdictions to assist them in achieving their green building objectives in planning and construction of residences. The Build It Green objective is to partner with government to establish credible and accessible policies that promote private sector innovation and provide consistent guidelines statewide through adoption of GreenPoint Rated as the standard for local government policies and incentives. As part of this effort Build It Green will be establishing new public agency councils and will work to strengthen existing ones. Build It Green will continue to conduct training for local governments. Build It Green also intends to become a clearinghouse that will benchmark and track local government policies, programs, and incentives. Local government green programs that intend to be comprehensive need to expand expertise and training to the LEED program in order to address commercial, institutional, and industrial buildings.

Build It Green has not been developed as an organization to help individuals comply with local green building programs or interpret local ordinances to individuals.

### **Interact with the Building Industry**

Build It Green works with Builders, Contractors, Architects, Manufacturers, Distributors, Retailers, Realtors, Lenders, and Appraisers to assemble information and train building professionals on the latest best practices, materials, and technologies. Build It Green also seeks to connect green building product suppliers with consumers. Technical resources will be available on the website. As part of this effort Build It Green will provide technical assistance and

establish and expand professional Councils, and it will support green building trade shows and professional events.

Build It Green carries on an active dialogue with Building Industry Association Chapters across the state e.g. Home Builders Association of Northern California has formally endorsed GreenPoint Rated and promoted its adoption in the 101 cities and 14 counties in their service area.

## **Stimulate Demand**

Through outreach and education, Build It Green is building awareness of the benefits of green building and has developed GreenPoint Rated to be a trustworthy brand for green homes. As part of this effort Build It Green will connect buyers and sellers of green products, develop database tools to find green products, develop internet-based information resources, and provide marketing and sales training for green professionals.

## **Create Synergy**

The efforts with governments, building professionals and consumers are intended to be mutually supportive and reinforcing. Governments create requirements and provide incentives to utilize green building, which in turn is dependent on green products as demanded by knowledgeable consumers. Appendix B provides the process to update guidelines. The process involves numerous stakeholders and significant deliberation.

## **Benefits of Membership in Build It Green**

- Help support Build It Green programs and initiatives
- Company name and web link on [Our Members](#) page of Build It Green website
- Reduced fees for Build It Green's educational opportunities such as lectures, training and certification courses, and networking events
- Free technical information and access to Ask an Expert hotline where established
- Eligibility to participate in various [Build It Green Councils](#) for continuing education, networking, and collaboration with other professionals
- Permission to use the Build It Green Logo on jurisdiction's promotional materials (subject to guidelines)
- Members link to web site
- Receive newsletter and bulletins
- Acknowledgement in Local Government Spotlight

## SECTION 3: KEY ISSUES THAT MAY BE RAISED BEFORE YOUR JURISDICTION

### 1. Which program approach should be chosen - LEED, Build It Green, California Green Builder, In-house, or State Green Building Codes?

The contrast among green building approaches can be depicted as follows:

Target

Requirements

Benefits to Local Government

#### LEED

**Target:** LEED is a third party rating system that has several sets of standards that are directed toward office and commercial uses:

- [LEED for New Construction](#) (for commercial and institutional projects)
- [LEED for Existing Buildings](#)
- LEED for Existing Buildings: Operations and Maintenance
- [LEED for Commercial Interiors](#) (for the tenant improvement market)
- [LEED for Core and Shell](#) (for new core and shell construction)
- LEED for Schools

**Process Requirements:** Applicants must complete LEED submission requirements for a preliminary design phase review, a final design-phase review, a preliminary construction-phase review and a final construction phase review. LEED requires a series of seven prerequisites. Throughout the process credits are earned and produce a score. Scores provide the basis for designation of LEED Certified, Silver, Gold, and Platinum.

**Benefits to Local Government:** LEED is a nationally recognized green building program that provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources. When considering “going green” a jurisdiction often establishes the requirement that civic projects become LEED certified.

#### LEED for Homes

**Target:** LEED for Homes is a third party rating system that promotes the design and construction of high-performance green homes, including affordable housing, mass-production homes, custom designs, stand-alone single-family homes, duplexes and townhouses, suburban low-rise apartments, urban high-rise apartments and condominiums and lofts in historic buildings. LEED for homes is aimed at performance of the top 25% of new homes. LEED certification will also produce GreenPoint Rated certification.

**Process Requirements:** Applicants must complete LEED submission requirements for a preliminary design phase review, a final design-phase review, a preliminary construction-phase review and a final construction phase review. LEED requires seven prerequisites. Throughout the process credits are earned and produce a score. Scores provide the basis for designation of LEED Certified, Silver, Gold, and Platinum.

**Benefits to Local Government:** LEED is a nationally recognized green building program that provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources. When considering “going green” a jurisdiction often

### **Build It Green Guidelines**

**Target:** Build It Green Guidelines provide an entry-level to green building which can range from information for the public counter to an adopted checklist for Single Family New Homes, Single Family Existing Homes, Multifamily New Homes, and Multifamily Existing Homes (under production). The checklist can be used as voluntary information or a required tool to review the project.

**Process Requirements:** To remain Build It Green Requirements the list should not be revised. A section exists for innovations which includes the opportunity for unique local objectives. The manner in which the Guidelines are applied remains a local prerogative.

**Benefits to Local Government:** Guidelines are developed through an extensive collaborative process including stakeholders that will be affected by changes in the Guidelines. The Guidelines are supported by Build It Green advice and information. The Guidelines are communicated to State and Federal Agencies to ensure consistency and buy in.

### **GreenPoint Rated**

**Target:** GreenPoint Rated is a program of Build It Green that relies on a third party rating system for verification and consistency of program application. The programs include:

GreenPoint Rated New Single Family Construction

GreenPoint Rated New Multifamily Construction

GreenPoint Rated Existing Single Family Homes

GreenPoint Rated Existing Multifamily Construction (to be developed in 2009)

It requires an application and review during design, prior to sheeting, and at final inspection. Two prerequisites must be addressed. The program can either be voluntary or mandatory depending on the jurisdictions intentions.

**Process Requirements:** The process will be different depending on whether the jurisdiction elects to have the process voluntary or mandatory. When it is voluntary the jurisdictions role is to verify certification to justify whether incentive requirements, if any, have been met. When the process is mandatory the jurisdiction must incorporate it into their existing plan review, plan check, and inspection process. They must also address a series of issues that are described in more detail in Section 4, Step 6 of this document.

**Benefits to Local Jurisdiction:** The GreenPoint Rated program has been developed through years of effort and testing. It can be found in many locations in the state, which has produced an extensive network of local jurisdictions, builders, and suppliers. It includes a program of training raters and providing oversight. The points are updated and clarified through a collaborative stakeholder process. It has also received endorsement from state agencies, the Association of Bay Area Governments and the Home Builders of Northern California. GreenPoint Rating is an acknowledged brand for green building. A Climate/Resource Calculator and Tracking System has been developed to determine reduction in CO2 and energy use to enable local jurisdictions to track the effectiveness of their efforts.

### **California Green Builder``**

**Target:** California Green Builder offers a non point, with random inspections for a production home builder who builds at least 85 homes a year or builds subdivisions with master plan approval for their building permits. The building industry remains in charge of the process with the focus on energy and water conservation.

**Process Requirements:** The program is designed to be voluntary though local governments can adopt it as mandatory. When plans are submitted, the CGB program coordinator reviews submitted materials for accuracy and verifies compliance with CGB requirements. Upon plan approval Building Industry Institute (BII) shall designate the project as "CGB Applicant" pending final inspections of the subdivision. After reviewing project documentation, Builder is entitled to use the California Green Builder Logo and to designate the project as a California Green Builder subdivision or community. CGB certified inspectors shall provide final inspection results to Builder and to BII during build-out to verify project compliance with CGB requirements. BII shall randomly inspect homes to ensure that CGB Requirements have been met.

**Benefits to Local Government:** It is an established program that reduces energy and water consumption that is generally administered by the building industry and not by local government.

### **In-house program**

**Target:** Prior to the development of certification programs, progressive jurisdictions developed and adopted their own programs so "green" requirements could be enforced. The target of the program was up to the jurisdiction.

**Process Requirements:** The process is normally integrated with the jurisdiction's building plan check and inspection. It does not normally receive third party verification though some jurisdictions have created their own point system or modified an existing system. Most such systems are unique to their jurisdictions so the value of the "point rating" would vary among jurisdictions.

**Benefits to Local Jurisdictions:** In-house programs may not receive any independent certification or other benefits of certified programs such as calculation of green house gas reduction or energy savings. Since the "green building industry" is rapidly evolving it places additional responsibility on the jurisdiction to keep up with changes brought about by new materials, building methods and government requirements.

### **California Building Commission Green Building Codes**

**Target:** New green building codes similar to traditional building codes will go into effect January 1, 2011, requiring local adoption prior to that date. In addition to the green building codes an Appendix A was adopted as voluntary best practice suggestions from the Commission. The new California Green Building Standards Code addresses all building types; however, it treats homes and commercial buildings very differently. All of the proposed measures in the new code will be voluntary until 2011, but only residential will have a short list of mandatory requirements at that time. The commercial section consists of a longer list of measures that are voluntary and are not slated to become mandatory. The code

is meant to set the minimum floor and does not preempt local governments to go above and beyond.

**Process Requirements:** The procedures to be followed are the same as for any state code amendment process. The Code is adopted; the model code is prepared and circulated to local jurisdictions. A timeframe is established for comment and clarification provided, and a deadline is established when the State Code will go into effect. Local jurisdictions who wish to avoid conflict between state and local codes adopt local revisions based on the changes adopted by the state.

**Benefits to Local Jurisdictions:** For jurisdictions that are not interested in developing green building standards, state changes will provide some gradual improvement without local effort. The new green building code is not equivalent or a substitute for GreenPoint Rated or LEED.

**Recommendation of Build It Green.** For jurisdictions who wish to have a recognized green building program that will comply with state requirements and provide a tracking system for CO<sub>2</sub>, energy, and cost savings, adopt the following:

LEED rating for new and existing Commercial, Institutional, and Industrial construction including commercial interiors and core and shell and allow LEED for Homes aimed at performance of the top 25% of new homes. Jurisdiction may wish to make LEED for homes required for homes above a certain threshold in size.

Build It Green, GreenPoint Rated with third party verification for the establishment of a threshold to green building in the community.

## **2. Should green building verification be self certified, conducted in-house or outsourced to a third party?**

Self certification

Some programs permit self-certification particularly at the lower levels of compliance; some jurisdictions allow it at any level. Build It Green does not recognize self certification. Self interested individuals may be motivated to certify particularly when they have designed or built the structure. There may be mistakes in the score or poor interpretations of point qualifications. There is concern that a program such as GreenPoint Rated would cease to be a reliable label if self certification becomes part of the process.

Benefits of in-house

- Staff gains expertise

- Verification is conducted according to jurisdictional standards and direction of the agency

#### Limitations of in-house

- Inspection staff may not have time to do full verification and thereby lose home certification. Spot checking will not produce a GreenPoint Rated designation or access to the Climate Calculator. Under carefully monitored circumstances a staff member who is certified and dedicated to rating may satisfy Build It Green requirements.
- The process of verification is time intensive and most local jurisdictions with a high volume of building activity do not have the time to conduct a full verification
- Process may be delayed during periods of heavy activity and competing assignments
- In-house staff may be less inclined to keep up with changes
- Training and responsibilities may be outside of job scope

#### Benefits of out-source

- Process is independent of office workload
- Process is out of payment and accounting of agency
- Standards of verification will be higher
- GreenPoint Rated is an important label that exerts influence for green building in the marketplace

#### Limitation of out-source

- Contractor may use direct payment as leverage for personal objectives

**Recommendation of Build It Green. Out-source verification process to private raters to insure consistent standards and timely third party verification.**

### **3. Should the program seek to attain GreenPoint Rated Label or just require third party certification?**

While there is a charge for attaining the GreenPoint Rated label it will enable green building tracking and use of the Climate Calculator as well as a recognized designation important for resale and other transactions.

**Recommendation of Build It Green. Take full advantage of the GreenPoint Rated label.**

**4. Should the program be voluntary or mandatory?**

A mandatory program should not be undertaken by a jurisdiction unless the appropriate infrastructure is in place such as appropriate ordinances, training, and accounting. Green building materials must be accessible through an effective supply chain. Staff must be on board and up to speed. There need to be an adequate number of raters available in the area. There must be buy-in from primary stakeholders. Many Bay Area communities can be considered mature in this process and prepared to operate under mandatory requirements; this is one reason the Home Builders Association of Northern California has endorsed mandatory programs.

**Voluntary program**

- Most jurisdictions began with voluntary programs
- A builder would participate in a voluntary program because it offers builders a green rated designation for the product and possible incentives for the jurisdiction.
- By beginning with a voluntary program the jurisdiction can train staff to integrate green point rating and third party verification into their current application process
- If a jurisdiction is not ready for a voluntary program it can strive for best practices

**Mandatory programs**

Mandatory programs create a higher level of green building

Agencies considering mandatory approach need to take the following items into account:

- a. Need to conduct a careful review of legal implications with City Attorney or County Counsel. Because cities and counties have the obligation to enforce the California Building Standards Code, there are specific procedures that must be followed when making modifications to the Code at the local level. These specific procedures may include:
  - Amendment of the California Energy Code, filed with the California Energy Commission – this approach is suitable for those provisions of a green program that directly address energy performance standards.
  - Amendment of the California Building Code, filed with the California Building Standards Commission – for measures that are “reasonably

necessary because of unique local climatic, geologic or topographic conditions”.

- Requiring green building as part of a Condition of Approval on a project by project basis.
  - Limiting mandatory requirements to those green building practices that do not require changes to the Code.
- b. Need to establish meaningful thresholds and enforcement. A jurisdiction must be willing to commit resources to establish plan check procedures and inspections to verify compliance with the ordinance. Adequate staff training is essential to conduct a mandatory program. Third party verification will ensure consistency and legitimacy of a program.
  - c. Need to develop ability to quickly review plans and conduct inspections preventing delay to the overall process. Staff need to be adequately trained, informed and conversant in the program in order to communicate effectively with the building community.
  - d. Need to review cost effectiveness of the program.
  - e. Community acceptance is essential for a successful program, which includes informing builders, educating the public, and ensuring the availability of adequate local infrastructure (green products suppliers, certified green building professionals, etc.)

**Recommendation of Build It Green. Begin with a voluntary program and shift to mandatory when the program is well understood, supported and de-bugged.**

#### **5. Should there be a mandatory requirement for GreenPoint Rated Existing Homes?**

GreenPoint Rated Existing Home was launched Summer, 2008, and there is a limited but growing pool of trained professionals. There will be a GreenPoint checklist and minimum requirements for these ratings. If the jurisdiction wishes to pursue requirements for remodeling projects at a future time, the threshold for compliance should be set at a level that does not unduly burden homeowners with small projects. A lot of remodeling projects are done by “do it yourselfers” who are not familiar with building issues, so the need for education and flexibility is paramount.

**Recommendation of Build It Green. Existing Home/Remodel GreenPoint Rating should be voluntary for the present time.**

#### **6. Why does Build It Green support a threshold of 50 points rather than a higher number?**

The concept of rating is based on green building above and beyond state building code requirements that apply to all construction. In this way Build It Green raises the bar on construction materials and methods. As has occurred

with energy requirements, the state periodically raises code requirements, usually when they have been field tested as voluntary standards. When the code requirements are increased, the GreenPoint Rated standards are modified to sustain the level of rigor in the program since state adopted requirements no longer count as GreenPoint Rated points.

Guidelines and point systems are carefully developed through technical meetings with multiple stakeholders to ensure that elements are beneficial, cost effective, practical, and can be applied consistently throughout the state. Local innovations can be added without disrupting the established guidelines and rating. Adding new requirements at a public hearing is not encouraged because the necessary analysis may not have taken place. [Link to Appendix B](#)

**Recommendation of Build It Green. Use the latest information and begin at a threshold of 50 points. With experience, some adjustments can be made.**

## **7. What incentives, if any should be provided?**

Incentives can help promote competition within the construction market and reward excellence. Incentives can include publicity and promotion of green projects by the city. Some local jurisdictions have established the following:

- Expedited permit processing
- Fee waivers
- Issuance of city recognition through certificates and plaques
- Rebates for energy efficiency, water efficiency, and renewable energy upgrades
- Density bonuses
- Reduced parking requirements

[Links to incentive programs in California jurisdictions.](#)

**Recommendation of Build It Green. Seek Incentives to improve acceptance of the program.**

## **8. How can program effectiveness be quantified?**

In general, counting the number of homes that have qualified for a GreenPoint Rated designation offers some information for an annual report but it will not satisfy State reporting requirements derived from the State mandate connected with AB 32. The State will require the quantification reduction of Green House Gases not units produced. This was a primary incentive for developing the Build It Green tracking system and the Climate Calculator which will quantify units, green house gases reduced, energy reductions, and homeowner savings.

**Recommendation of Build It Green. Gain access and use the tracking and Climate Calculator systems.**

## **9. How to develop access to GreenPoint Raters**

Two avenues can be used to contact a Certified GreenPoint Rater for your project:

- a. Browse the GreenPoint Rater Directory for a complete listing of Certified Raters, and filter by region to find a Rater in your area.
- b. The other option is to contact [Build It Green](#) with a Request for Rater. Build It Green staff will send an email to all Certified Raters and pass on the contact information of Raters interested in your project. This is a great way to narrow the list of Raters down to those currently accepting projects.

## **10. How to address different types of projects**

Build It Green has developed Current guidelines that include *New Home Construction 2007 Edition*, *Home Remodeling 2007 Edition*, and *Multifamily Green Building Guidelines 2008-2011 Edition*. A Directory of California State local government ordinances and guidelines will be developed to assist jurisdictions in assessing the features of different ordinances.