



ENERGY SMART SMART GROWTH A CASE STUDY

BUILT GREEN WASHINGTON

A case study of private builders making efforts to incorporate green building practices in Seattle and neighbouring area developments

BUILT GREEN:

Built Green™ of King and Snohomish counties was started in 1999 as a joint venture between the Master Builders Association of King and Snohomish Counties (MBA), King County, Snohomish County, and various other Washington agencies. The groups launched the non-profit when salmon were put on the endangered species list. Given that salmon decline was attributed in part to the homebuilding process, builders wanted to take a proactive step in mitigating the effects. Today the Built Green program is “a network of architects, builders, developers, subcontractors, suppliers, lenders, and real estate agents” who all seek to “help homebuyers find quality, affordable homes that offer opportunities to protect the health of their families and the Northwest environment.”¹ The program based its form off Built Green Colorado and has a licensing agreement with them to share the name as well.



HOW IT WORKS:

Builders and other members involved in the housing industry join Built Green by paying an annual membership fee (\$100 for MBA members and non-profits, \$250 for non-MBA members). Upon joining the program, builders are required to take an introductory seminar to Built Green offered by the MBA University and are given the Built Green handbook. The handbook explains in detail the green building practices established within the Built Green checklist.²

Built Green currently has rating systems for four different types of construction. They include: single family homes, remodels, multifamily homes, and communities or developments. Within each of these categories are a series of checklists which allow the program to award a 1-5 star Built Green rating to each completed project. The checklists are used prior to construction. After completion, builders send their checklists to the MBA to certify the green features. For the highest two star ratings, “the builder or designer must engage a qualified third party to verify the checklist.”³

The checklists are organized into six areas including: Green Codes, Site and Water Protection, Energy Efficiency, Health and Air Quality, Materials Efficiency, and Environmentally Responsible Home Ownership. Certain checklist options are weighted more than others and thus give you more points toward your overall rating. In general the more options you implement from the checklists the higher

¹ <http://www.builtgreen.net/faqs.html#1>

² Interview, Koben Calhoun

³ <http://www.builtgreen.net/>

your star rating will be. The checklists force Built Green rated houses to go above and beyond Washington building codes, which in turn makes them much more energy efficient and environmentally friendly.

To receive a 1-star rating in the single family home category, builders must meet a host of Washington state green codes and regulations including energy and water use codes. They must also prepare a jobsite recycling plan that is posted on the site and provide the owner with an operations and maintenance kit. In order to receive higher star ratings builders must meet all of the 1-star requirements as well as additional requirements. Each item on the checklist is given a specific number of points ranging from 1-10. In order to get a 2-star rating, builders must add 100 points, at least 6 of which need to come from every section. The 3-star level is even more rigorous, as the requirement is a minimum of 180 points. The 4 and 5-star level requirements not only have higher minimum point values but also have their own specific requirements, which is why a third party is needed to award said levels.⁴

Although energy usage is lower in Built Green houses it is currently unknown how much of an impact the overall program has had on emissions goals. This is because the numbers are hard to quantify because some of the measures taken to decrease energy use are not measurable on a large scale basis. For example, two projects will have differing emissions levels despite both having received 4-star ratings. In addition, some houses may opt to take a few energy saving measures but not all of them. Because of these difficulties Built Green is trying to generate some energy statistics right now based on energy star appliances and energy efficient light bulbs.⁵

KEY PROGRAM REQUIREMENTS:

- **Green Codes:** Builders are required to meet energy, air quality, water efficiency, and storm water management standards.
- **Site and Water Protection:** Built Green offers a variety of common-sense site and water protection and development techniques you can use to earn points and be a “fish-friendly” builder.
- **Energy Efficiency:** Your project earns extra points for extra energy efficiency and your customer will enjoy increased comfort and reduced energy bills.
- **Health and Air Quality:** Promote good air quality, before, during, and after construction. Your clients and crews will be both healthier and safer.
- **Materials Efficiency:** These help you reduce job-site waste which saves money on both ends. By using resource-efficient materials, you not only reduce the impact of construction on the environment, you get credit for doing it!
- **Environmentally Responsible Home Ownership:** This section recognizes the importance of making certain the Built Green home stays “green”. By integrating homeowners’ education in your approach you provide your customers with value-added services.

SEATTLE CLIMATE ACTION PLAN:

⁴ Built Green Checklists, <http://www.builtgreen.net/documents/Homebuilder%20Checklist.pdf>

⁵ Interview, Koben Calhoun

In September 2006, the city of Seattle formally drafted a climate action plan. The plan mainly consists of recommendations formed by the mayor's Green Ribbon Commission on Climate Protection and does not discuss Built Green. It is extremely comprehensive, explaining what needs to be done, investments and actions that will get it done, and how the outcome will be measured. Specific actions are designated in three different categories where Seattle can reduce energy usage and greenhouse gas emissions. These include: reducing dependence on cars, increasing fuel efficiency and use of biofuels, and achieving more efficient and cleaner energy for homes and businesses.

MEASURES TAKEN IN SEATTLE'S CLIMATE ACTION PLAN

Reduce Dependence on Cars:

- The City will double the existing 25 miles of marked and striped bicycle lanes
- The City has committed \$4 million for transit corridor and reliability improvements
- A 10% commercial parking tax will be implemented between July 2007-2010

Increase Fuel Efficiency and Use of Biofuels:

- The Police Department will transition to fuel efficient gas-electric hybrids
- The City will increase fuel efficiency and use of biofuels in commercial fleets
- The City will increase biofuel blends from B20 to as much as B40 in 2007

Achieve More Efficient and Cleaner Energy For Homes and Businesses:

- Acquire at least 7.5 average megawatts through conservation measures in 2007 and 2008
- Conserve hot water and gas by using shower-head and faucet aerators
- Implement cost-effective conservation and energy efficiency measures in city facilities

The city also has plans to extend the city's leadership on climate change and inspire action through the Seattle Climate Partnership and a Neighborhood Climate Protection Matching Fund to help finance neighborhood-based action. Although the plan does not specifically reference Built Green, it does state "Success will depend on individuals, businesses and the community working together in ways large and small to reduce greenhouse gas emissions."⁶

CONCLUSION:

Since its inception, the Built Green program has managed to take a hold all over Washington. Now Clark, Kitsap, Jefferson, Clallam, Thurston, Lewis, Mason, Grays Harbor, and Pierce county's have their own programs and more are in development. Although each county's program is unique, they all meet together under the umbrella organization, Built Green Washington. One of the reasons Built Green is so successful is because of its original structure as a non-profit within the Master Builders Association itself. By creating the program internally- instead of having an outside regulator- the MBA can work much closer with builders. It also allows Built Green to hear what builders want and adapt accordingly while still keeping high standards when it comes to green building and the environment. Washington builders have been extremely receptive to Built Green as the program was developed with them in mind.

Overall, Built Green's success can truly be seen in its numbers. According to the October, 2006 *Built Green News*, 9,014 homes have been certified in King and Snohomish counties since 2000, with 2,121 homes in 2006 alone. The program has also allowed green building costs to stay down. According to Koben Calhoun, "At the 3-star level (the most popular), there is no difference in the cost of building green

⁶ City of Seattle Climate Action Plan, www.seattle.gov/climate

versus standard building practices. At the higher 4 and 5-star levels there is an increase in the cost of building green, which is primarily associated with some of the mechanical systems used at that level.”⁷ In the long run, green building techniques lead to lower energy usage, which in turn, leads to lower energy bills. Thus, since Built Green has found a way to keep building costs equal to traditional building, those who chose Built Green will actually save money in energy bills over time.

A MODEL BUILT GREEN COMMUNITY:

HIGH POINT:

This 120 acre community is Built Green certified in two ways. Not only did it meet the requirements to receive a three star rating in the Communities category, but developers went a step further and made sure that every one of the 1,600 units within the community itself meets the criteria for a three star rating in the Multi-family category.

High Point is a residential community that was redeveloped by the Seattle Housing Authority, Mithun Architects, SvR Design, and Nakano Associates.

Some special features of the community and houses include:

- High density housing and narrow, walkable streets.
- Swales and check dams (instead of curbs and gutters) to slow the runoff of storm water so it can be absorbed into the soil and filter naturally back into a nearby creek.
- Each of the 1,600 homes include features such as high-efficiency heaters, quiet whole-house fans, airtight drywall insulation, and reduced-emission paints and cabinets.
- 35 “Breathe-Easy Homes” designed for asthma sufferers.

High Point was awarded the "Show You're Green" awards at the American Institute of Architects (AIA) 2006 National Convention and Design Expo. This award aims to showcase the wide range of ways that architects have included green elements in aesthetically excellent, affordable designs.

The High Point neighborhood in Seattle was recognized for incorporating sustainability factors into the entire process—from recycling the previous development's old-growth lumber to natural drainage systems that mimic the drainage qualities of an open meadow. All homes meet local Built Green three-star standards, and 150 trees are preserved on-site.

⁷ Interview, Koben Calhoun

FOR FURTHER INFORMATION:

- Built Green - <http://www.builtgreen.net/>
- Built Green Checklists - <http://www.builtgreen.net/checklists.html>
- Built Green Washington - <http://www.builtgreenwashington.org/>
- Seattle Climate Action Plan - http://www.seattle.gov/climate/docs/SeaCAP_plan.pdf
- Seattle Climate Webpage - <http://www.seattle.gov/climate>
- High Point neighborhood - <http://www.thehighpoint.com/>
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