Home Innovation RESEARCH LABS™

April 15, 2014

North Carolina Housing Finance Agency
PO Box 28066
Raleigh, NC 27611-8066
Submitted electronically: bsfarmer@nchfa.com

Dear Mr. Farmer:

On behalf of Home Innovation Research Labs, I write to advocate that the North Carolina Housing Finance Agency recognize *the ICC-700 National Green Building Standard™* (NGBS) in the 2015 North Carolina Qualified Allocation Plan and application for Single Family Rehabilitation Program.

I believe that there are several compelling reasons why NC HFA should recognize the NGBS. First, the NGBS offers a more comprehensive approach to sustainable design that the energy efficiency standards that are currently required in the Qualified Allocation Plan. Second, the NGBS is the most rigorous, cost-effective, and flexible residential green rating system. Third, the NGBS was specifically designed for residential projects and is affordable to implement making it ideally suited for low-income housing programs to increase the construction or renovation of green housing in a cost-effective manner. Finally, as the NGBS includes certification options for single-family, multifamily, and remodeling projects, the program is well-suited to become a criterion for many of the agency's programs.

National Green Building Standard Overview

The NGBS is the first and only residential green building rating system to undergo the full consensus process and receive approval from the American National Standards Institute (ANSI). ANSI accreditation of any standard is important because it ensures balance, representation, openness, consensus, and due process in the standard's development process. The Consensus Committee that developed the first version of the NGBS was comprised of 42 individuals representing a variety of government agencies, municipalities, home building industry stakeholders, and non-profit organizations. For example, representatives from the U.S. Department of Energy and the U.S. Environmental Protection Agency were among the federal agencies represented. The U.S. Green Building Council was represented; and 10 state or local municipalities participated. Three members were builders. Diverse representation of stakeholders ensures that the NGBS maintains a balance of stringency with regard to desired performance and practicability. Over 2,000 public comments were considered as part of the NGBS development process. The 2012 version of the NGBS followed a similarly rigorous and inclusive development process.

The NGBS was intended to be a voluntary, above-code green program. For a single-family home or multifamily building to be certified, the building must contain all mandatory practices in the NGBS. The

home or multifamily building must also contain enough practices from each of the six categories of green building practices to meet the required threshold points (See page 12 in the 2012 NGBS).

The six categories of green practices are:

- Lot & Site Development
- Resource Efficiency
- Energy Efficiency
- Water Efficiency
- Indoor Environmental Quality
- Homeowner Education

Under the NGBS, homes and multifamily buildings can attain one of four potential certification levels: Bronze, Silver, Gold, or Emerald. The NGBS was specifically designed so that no one category of green practices was weighted as more important than another. Peerless among other green rating systems, the NGBS requires that all projects must achieve a minimum point threshold in every category of green building practice to be certified. A project certified to the NGBS can't merely obtain all or most of its points in a few categories, as other rating systems allow. This requirement makes the NGBS the most rigorous green building rating systems available at this time.

The NGBS has few mandatory provisions, though all of them must be met for certification at any level. Instead, the NGBS is an expansive point-based system that requires a project to include many different types of green practices. Builders and developers are able to customize their projects by the practices they select to earn the "Additional Points" that are required. This provides the flexibility builders and developers need to ensure their green projects reflect their geographic location, climatic region, cost constraints, and the type of project they are constructing.

As an ANSI-approved standard, the NGBS is subject to regular reviews and periods of public comment. The second version of the *National Green Building Standard™*, known as the 2012 NGBS, was approved by ANSI in 2013. The development process for the 2015 version of the NGBS is currently underway.

Remodeling/Renovation

The NGBS offers two options for certifying remodel projects. Certification of a whole-building remodel requires demonstrating that there has been a minimum of a 15% reduction in energy consumption and at least a 20% reduction in water consumption over the pre-remodel condition. In addition, there are some mandatory practices that must be met. A minimum number of points must be obtained from practices related to Lot Design, Resource Efficiency, Indoor Environmental Quality, and Homeowner Education. With each higher level of certification comes higher requirements for energy savings and water reduction, as well as points. The Small Projects option covers kitchen, bathroom, basement, and small addition remodels. Unlike the Whole–House/Building Remodel, the Small Project certification is prescriptive. The NGBS includes a list of mandatory practices, related to materials use, sustainable products, energy efficiency, and indoor environmental quality. All applicable practices must be met for certification.

Certification Program

Home Innovation Research Labs serves as Adopting Entity and provides certification services to the NGBS. Home Innovation Labs is a 50-year old, internationally-recognized, accredited product testing and certification laboratory located in Upper Marlboro, Maryland. Our work is solely focused on the residential construction industry and our mission is to improve the affordability, performance, and durability of housing by helping overcome barriers to innovation. Our core competency is as an independent, third-party product testing and certification lab, making us uniquely suited to administer a green certification program for residential buildings.

Two Mandatory Inspections

To be certified to the NGBS, every green project is subject to two independent, third-party verifications. There is no self-certification in our program. Builders must hire an independent, accredited verifier who is responsible for visual inspection of every green building practice in the home or dwelling unit. The verifier must perform a rough inspection before the drywall is installed in order to observe the wall cavities, and a final inspection once the project is complete. The required verification imbues a high level of rigor and quality assurance to the program and to the projects that are certified.

Home Innovation Labs qualifies, trains, and accredits building professionals to provide independent verification services for builders. Verifiers must first demonstrate that they possess experience in residential construction and green building before they are eligible to take the verifier training. Many verifiers are HERS raters and/or LEED raters. Potential verifiers must complete thorough training on exactly how to verify every practice in the NGBS. After completing the training, verifiers must pass a written exam and demonstrate that they carry sufficient liability insurance before receiving Home Innovation accreditation. Verifiers must have their accreditation renewed yearly. They serve as our in-field agents to verify buildings are built in compliance with the NGBS.

Home Innovation Labs reviews every rough and final inspection to ensure national consistency and accuracy in the verification reports. Further, we regularly audit our verifiers and the verifications that they perform as part of our internal quality assurance program.

Credibility and Rigor

Several studies have been completed to demonstrate the affordability and/or rigor of the NGBS. *Green Home Building Rating Systems - A Sample Comparison*[1] evaluates the costs and technical requirements of bringing two sample code-compliant production houses in different climate zones into compliance with the NGBS and LEED for Homes. AIA Cincinnati published a report[2] comparing the NGBS and LEED for Homes that found the programs to be essentially equivalent in rigor, but the NGBS to be more affordable and easier to use. The Home Builders Association of Greater Chicago released an

[1] www.homeinnovation.com/services/certification/green_homes_and_products/multifamily_certification/~/media/Files/Reports/GreenHomeRatingComparison.ashx
[2] www.aiacincinnati.org/community/LEED_NAHB_Sum.cfm

independently prepared report[3] evaluating the additional costs required to elevate three sample code-compliant, urban, residential building types in the City of Chicago into compliance with the Chicago Green Homes Program (CGH), the NGBS, and LEED-H.

Legislative and Regulatory Parity with LEED

The NGBS was developed after the USGBC's LEED rating systems; therefore, LEED is more commonly recognized in legislative and regulatory initiatives. However, since 2009 when ANSI first approved the NGBS, we have found that without exception the NGBS has been considered as on par or more stringent than LEED as a green building rating system for residential projects. On the federal level, HUD has recognized the NGBS as on par with LEED. For example, in their recent funding notice for jurisdictions affected by Hurricane Sandy they cite the NGBS as an acceptable green building standard for reconstruction efforts. In New York State, NYSERDA provides financial incentives for residential buildings certified to the Silver level of either the NGBS or LEED. Delaware State also provides financial incentives for homes built to the Silver level of either the NGBS or LEED in its Green for Green program. To date, not a single jurisdiction has refused to recognize the NGBS as an alternative compliance path for any regulatory or incentive program where we have asked them to make an equivalency decision. For a more complete listing of where the NGBS has been recognized, please visit our summary of incentives[4].

QAP Recognition of the NGBS

The National Green Standard is currently recognized in 17 state Qualified Allocation Plans (QAPs), and an increasing number of State Housing Finance Agencies have been adding NGBS green certification to their QAPs to help promote green affordable housing. In these plans, NGBS is recognized as on-par with comparable programs, such as LEED, ENERGY STAR, Enterprise Green Communities, and other regional programs. Multifamily builders who utilize NGBS for low-income housing tax credits typically receive the same number of points for NGBS as they would for an alternative program. The straight-forward and low-cost nature of the NGBS certification program make it ideally suited for affordable housing development, and this is evident by the number of Habitat for Humanity organizations and other LIHTC providers who select NGBS as their program of choice.

Program Statistics to Date

Home Innovation Labs has certified approximately 8,708 projects to date, including 954 multifamily buildings representing 23,858 dwelling units. Currently, there are 2,835 units in process, including 933 multifamily buildings, representing 48,348 dwelling units. Remodeling projects are included within those total numbers. While we don't specifically track the number of projects that are affordable housing, we have certified many LIHTC projects as well as other affordable and workforce housing developments. I believe that this indicates we have been successful in designing a green certification program that is affordable and flexible, while remaining rigorous.

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[3] www.homeinnovation.com/services/certification/green_homes_and_products/multifamily_certification/~/media/Files/Reports/UrbanGreenBuildingRatingSystemsCostComparison.ashx

[4] www.homeinnovation.com/ngbsgreenincentives

North Carolina

North Carolina builders, developers, and remodelers have found success with the National Green Building Standard. In fact, North Carolina is the #1 state for NGBS certification activity. The North Carolina Energy Efficiency Alliance (NCEEA) recently released a market study of green certified homes built in 2013[5]. The data revealed that 5% of North Carolina's total new home market is NGBS Green certified. NGBS was the preferred choice among multi-attribute certification programs.

Summary

The goal of the NGBS and the Home Innovation NGBS Green Certification Program is to recognize projects that reach exceptional levels of sustainable design. We have worked hard to develop a program that removes as many barriers as possible to high-performance green buildings without eliminating any of the rigor or verification necessary to ensure compliance. To this end, we have kept our certification fees low, minimized the time needed for interpretations and project review, and significantly reduced the costs required to incorporate green practices. I request that NGBS certification be added as an optional requirement under the Qualified Allocation Plan and Single Family Rehabilitation programs.

I am happy to meet with you or your staff should you require a more detailed overview of the NGBS or our certification program. I will also gladly send you any supplemental information that you might require. Please don't hesitate to contact Michelle Desiderio (mdesiderio@HomeInnovation.com, 301.430.6205), our Vice President, Innovation Services, directly if she can be of further assistance.

I look forward to working with the North Carolina Housing Finance Agency to promote green certified housing built to the *National Green Building Standard™*.

Best,

Michael Luzier
President and CEO

cc: Russ Griffin (rgriffin@nchfa.com)
Chuck Dopler (jcdopler@nchfa.com)

[5] http://ncenergystar.org/sites/ncenergystar.org/files/NCEEA%20HPH%20report%20FINAL%20.pdf