City of Ketchum, Idaho

P.O. Box 2315 Ketchum, ID 83340 (208) 726-3841 Fax: (208) 726-8234

January 18, 2011

Mayor Hall and City Councilors
City of Ketchum
Ketchum, Idaho

Mayor Hall and City Councilors:

Progress Report on Sustainable Building Code for Ketchum

Introduction/History

As one of its 2010 Goals, the Ketchum City Council decided to pursue an "above-code" green building initiative. In November, 2010, the mayor appointed a diverse team of seven individuals to research existing green building codes, to involve and educate the public and to help the Council enact a code. The new code should reflect Ketchum's status as a regional and national resort leader and should balance the City's environmental, economic and social needs.

Current Report

The team has set forth a process and has accomplished the checked items:

- ☑ Set goal
- ☑ Create team of stakeholders
- ☑ Research existing codes and standards
- ☑ Research financial impacts
- ☑ Make recommendations
- ☐ Get City and public input
- ☐ Refine, based on input
- ☐ Repeat, until final product
- ☐ Adopt
- ☐ Enforce

The team is presenting their progress to the City Council on January 18, 2011, to initiate the next step: City and public input on the process and direction.

The team has built upon the public outreach and research that the City of Hailey and Blaine County have done. It has researched a variety of codes and standards, including Hailey's, Blaine County's, those of other jurisdictions, including Aspen and Boulder, LEED, ASHRAE and the International Code Council (ICC).

The ICC's residential and commercial codes stood out from the rest for the following reasons:

- They address the spectrum of sustainable building practices: Energy, water and resource efficiency, land use, indoor air quality, operations, and they include practices for updating existing buildings.
- They were developed by the same consensus and review process that is used for developing the other ICC codes and were intended to compliment and build upon the other ICC codes that Ketchum has adopted.
- The commercial code, the International Green Building Code (IGCC) was developed by representatives from the ICC, the American Institute of Architects (AIA), the American Society for Testing and Materials (ASTM), the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), the Illuminating Engineering Society (IES) and the US Green Building Council (USGBC).
- The residential code, the National Green Building Standard (NGBS), was developed by the ICC, the American National Standards Institute (ANSI) and the National Association of Homebuilders (NAHB).
- Both codes are designed to allow the adopting jurisdiction flexibility in the degree of stringency as desired by the community.
- These are "model", not "life-safety" codes, which means they can be amended as desired by the adopting jurisdiction.
- Both codes have multiple paths toward compliance: prescriptive, performance and others, which allow the designer, the builder and their client a great deal of flexibility in how they achieve compliance.
- Both codes reflect the standard building and design practices of our community and should not be an overwhelming stretch to achieve. These codes will ensure that all structures are built to the same high standards that many of this community's architects and builders already consider standard best practice.

The International Energy Conservation Code (IECC) will become progressively more stringent as it moves towards the goal of using no fossil fuels for building operations by 2030. It is also widely anticipated by code developers that the ICC sustainable building codes will become standard along with the other ICC codes in the not distant future. Adopting these codes would put Ketchum in a proactive position, starting the learning curve and getting a head start on the future. Getting out in front of the minimum codes is pretty easy at this point in time. As the minimum codes get more stringent, it will become more difficult.

The next steps in the code adoption process involve delving into the particulars of the codes to determine exactly how to make them fit the Ketchum community's needs and desires. The team will be looking for input from the Council and the building community. It will also be doing further research on feasibility, applicability and possible alternative compliance paths, such as LEED.

Financial Requirement/Impact

The Department of Building Safety, which is now performing Ketchum's plan review and inspection, is very supportive of the proposed codes. They have the ability to perform the necessary duties of plan review and inspection.

Conversations with jurisdictions that have enacted these or similar codes indicate that plan review is minimally more time consuming and that virtually all of the inspections can be done concurrently with the usual inspections to date. The prescriptive path compliance method assumes verification by a building inspector. The performance path method, which allows for greater design flexibility, is verified by a third party professional.

Further research will be done into the financial impacts to the City.

Research into the financial impact on the building community indicates that sustainable building practices actually have long term positive effects, even if there may be a minimal upfront cost increase in design and construction. Decreased operating costs and increased human comfort and worker performance give added value to a project, whether to the owner/occupant or a future purchaser. The team will present data supporting this assertion.

Attachments

- Attachment A – IGCC Brochure
- Attachment B – NGBS Brochure

Recommendation

This is a progress report. Staff does not recommend any action at this time.

Suggested Motion

No motion is needed.

Sincerely,

Rebecca F. Bundy

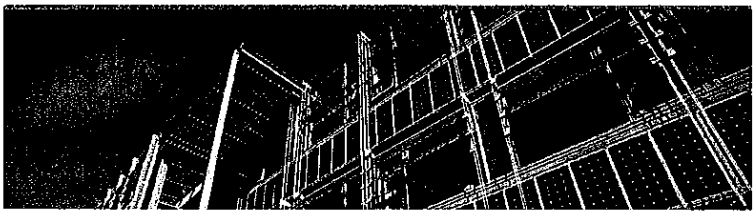
Rebecca F. Bundy
Associate Planner

IgCC

SAFE & SUSTAINABLE BY THE BOOK

IGCC: A NEW APPROACH FOR SAFE & SUSTAINABLE CONSTRUCTION

THE INTERNATIONAL CODE COUNCIL (ICC), along with its Cooperating Sponsors, is pleased to introduce the *International Green Construction Code* (IGCC). The Cooperating Sponsors are: the American Institute of Architects (AIA), ASTM International, the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), the U.S. Green Building Council (USGBC), and the Illuminating Engineering Society (IES). The IGCC includes ANSI/ ASHRAE/USGBC/IES Standard 189.1 as a *Jurisdictional Requirement Option*. This resource document can be used to immediately incorporate "green" components into existing or developing building codes. Application of the IGCC components will ensure integration with other International Code provisions and provide criteria that have been reviewed by experts in sustainable building science, safety, and building performance.



What does the IGCC do? The IGCC provides model code language to establish baseline regulations for new and existing buildings related to energy conservation, water efficiency, building owner responsibilities, site impacts, building waste, and materials and other considerations.

How does the IGCC become law? The model code language becomes law when it is adopted by the appropriate state or local authority charged with governing construction. The adopting jurisdiction is charged with determining the final content of the code, and has the ability to calibrate the application of the code on a project-by-project basis.

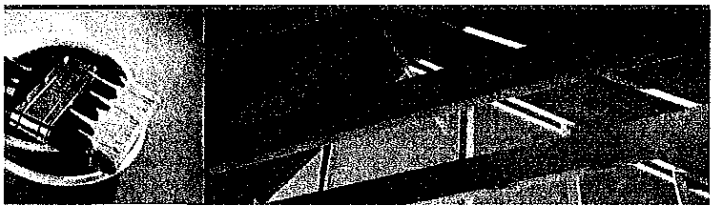
How does this complement existing rating systems or other guidelines? Rating systems such as LEED are voluntary guidelines for cutting-edge applications of green building design. The IGCC establishes minimum requirements for all buildings, providing a natural complement for voluntary rating systems which extend beyond the IGCC's baseline. The U.S. Green Building Council, creators of LEED, has participated in the development of the IGCC and endorses its usage as a viable option for communities that wish to regulate minimum green building provisions.

What if my state or local jurisdiction seeks a different approach than others considering the adoption of the IGCC? The IGCC establishes several levels of compliance, starting with the basic provisions of the code, and then offering "jurisdictional requirement" options. Further, the jurisdiction can add more guidance on a project-by-project basis through establishing the specific number of available IGCC "project electives."

How extensive is the IGCC and how difficult will it be to enforce? The IGCC has 11 chapters, plus two appendices. Many provisions in the IGCC are modeled after familiar tables and application tools that are found in other International Codes that have been adopted in every state in the United States. The IGCC acts as an overlay on other existing codes, including using the provisions of the *International Energy Conservation Code* (IECC) as a baseline. To make sure the IGCC is enforceable, it was reviewed by the same experts that develop the building codes that officials enforce daily.

Will there be professional development for those helping implement the IGCC? Training,certification exams, and contractor testing on the key elements of the IGCC currently are being offered by the International Code Council, with additional professional development and technical support materials under development. Representatives from IGCC sponsoring organizations also are available to speak about the code at local, state, and national events.

How was the code developed? The initial public version of IGCC was developed over an eight month period by a broad-based, 29-member Sustainable Building Technology Committee, with input from more than 100 Work Group members composed of experts in government, business and academia, code development and enforcement, architecture, materials science, engineering, and environmental advocacy. Subsequently, the code was updated and refined based on over 1,500 public comments and a public hearing conducted in mid-2010. The IGCC will be integrated fully into the existing I-Code family in early 2012 after hearings in 2011.



KEY COMPONENTS OF IGCC PUBLIC VERSION 2.0

IGCC Public Version 2.0 is now available as a resource for jurisdictions that are ready to adopt a useable and enforceable framework that links together issues of green design, building performance, and building safety.

Key changes in Public Version 2.0 include:

- A Zero Energy Performance Index (zEPI), requiring buildings to use no more than 51 percent of the energy allowable in the 2000 *International Energy Conservation Code*;
- The jurisdictional project electives formula now requires jurisdictions to enforce at least one and up to 14 electives;
- The addition of appliance information, radon mitigation, and documentation requirements to the commissioning provisions to ensure the health and safety of building occupants;
- A 20 percent water savings beyond U.S. federal standards for water closets in residential settings;
- New requirements for identification and removal of materials containing asbestos;
- Land use regulations including new provisions addressing flood risk, development limitations related to "greenfields," use of turf grass, and minimum landfill diversion requirements;
- Movement of many responsibilities from the registered design professional to the owner to prevent potential conflicts with state and local requirements; and
- Consistency with industry standards for air handling systems.

Visit www.iccsafe.org/igcc for updates and to download IGCC Public Version 2.0 today.

THE IGCC IS:

COMPREHENSIVE: The IGCC applies to the construction of traditional and high-performance buildings, structures, and systems, including alterations, and additions.

INTEGRATED: The IGCC has been designed to coordinate and integrate with the health and safety features of existing I-Codes and existing rating systems such as LEED.

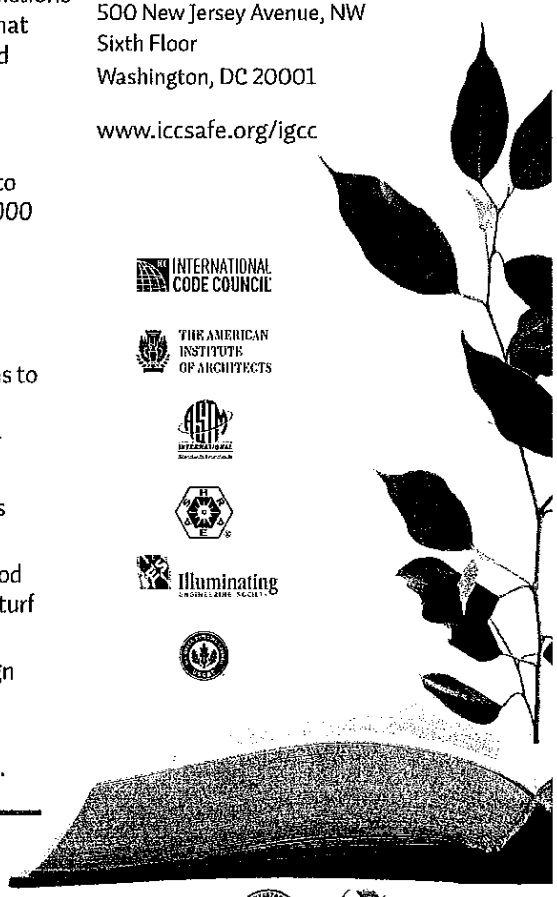
CONSENSUS BASED: ICC's open, governmental consensus code development process ensures that key stakeholder voices have been heard throughout the process.

ADAPTABLE: The IGCC is a "model" code, requiring adoption by a governing jurisdiction before it becomes law. In this way, the model language can, if necessary, be adapted to address local conditions.

ENFORCEABLE: The IGCC creates a regulatory framework for new and existing buildings, advancing and complementing the momentum in "green" building created by popular rating systems.

International Code Council
Corporate Headquarters
500 New Jersey Avenue, NW
Sixth Floor
Washington, DC 20001

www.iccsafe.org/igcc

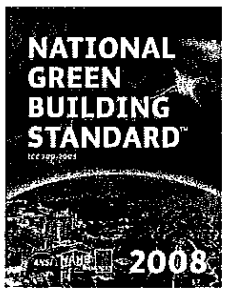


Printed on FSC certified stock, 100% Post Consumer waste with vegetable base ink.

NAHB RESEARCH CENTER℠

National Green Building Certification

National Green Building Standard Overview



The National Green Building Standard (the Standard) is a residential green building rating system. The Standard goes beyond the requirements of the International Residential Code to set green baselines for all new residential construction, development, and remodeling projects.

The National Green Building Standard is one of a number of green building rating systems currently available. However, there are five key areas that distinguish the Standard from other rating systems:

1) it is an authentic **ANSI-approved** consensus standard;
2) it has a complementary web-based **Green Scoring Tool**;
3) it requires uncompromising **third-party verification** and **certification** and does not allow for any self-certifications;
4) it establishes green practices for **all residential building and development** including single-family homes, multifamily residential buildings, residential remodeling and additions, and land development; and
5) it requires **progressively higher levels of environmental performance** in every category of green building practices to obtain higher levels of green certification.

ANSI Approval: A True Consensus Standard

When local, state, or federal officials reference green rating systems for incentive programs, tax credits and other initiatives, an ANSI standard holds more weight than a private rating system because ANSI oversees the standard-writing process in the United States and provides procedures for standard-making bodies to follow to ensure that the process is fair, open, and transparent.

The hallmarks of the ANSI process include:

- **consensus** on a proposed standard by a **balance of interested stakeholders**;
- **broad-based public review** and comment on draft standards;
- **consideration of and response to comments** submitted;
- incorporation of approved changes into a draft standard; and
- the **right to appeal** for any participant who believes that due process principles were not respected during the standard's development.

Many government agencies are required by law to use consensus standards whenever possible. ANSI also requires that the standard be continually reviewed for updates and inclusions based on new technologies and building techniques.

National Green Building Standard Consensus Committee

The Consensus Committee for the Standard consisted of members representing a wide variety of interests—builders, architects, regulatory entities, environmental organizations, and product manufacturers. Out of 42 members, 13 members represented local, state, or federal government agencies, including the U.S. Department of Energy and the U.S. Environmental

Protection Agency. Five members represented other green building organizations, including the U.S. Green Building Council. Only three members were builders.

The Standard and Certification

The Standard offers green building practices in six categories: Lot Design, Preparation, and Development; Resource Efficiency; Energy Efficiency; Water Efficiency; Indoor Environmental Quality; and Operation, Maintenance, and Building Owner Education. For a project to become Green Certified, a minimum score must be achieved in each category, with the point total requirements increasing for successively higher levels of green certification (Bronze, Silver, Gold, or Emerald).

Green Scoring Tool

A costly team of consultants is not required to have your projects Green Certified. The Green Scoring Tool is designed to guide users through the Standard step-by-step. Builders, developers, and remodelers can use the free Green Scoring Tool available at www.NAHBGreen.org to learn more about green building practices.

Independent Verification

The Standard requires that a qualified third-party inspect the project and verify that all green design or construction practices that the builder claims toward green certification have actually been incorporated into the project. Builders can not self-certify that their projects have met the criteria, nor can any employee of the builder, or trade contractors or suppliers that have supplied materials and/or installed products or systems in the home being verified.

The NAHB Research Center trains, tests, and accredits these verifiers and maintains a comprehensive list at www.NAHBGreen.org. Accredited verifiers must also maintain adequate liability insurance. At this time, there are more than 300 accredited verifiers nationwide.

National Green Building Certification

The NAHB Research Center certifies that projects meet the requirements of the National Green Building Standard. As an independent research and testing organization, the Research Center has the capacity, expertise, and credentials to ensure consistency, rigor, and credibility for the process.

The Research Center reviews every Verification Report submitted to ensure accuracy and completeness before certifying any project. The Research Center's Green Team provides technical information and assistance on green building products, new technologies, business management, and housing systems to all of our program partners at no additional charge. The Research Center also produces numerous technical resources to assist builders and verifiers through certification.

Green Certified Costs

There are three categories of costs to build a green project to any green rating system: construction, verification, and certification. Construction costs are highly variable and depend on the green building practices selected and market prices. Verification costs vary by market. The cost for a home to be verified to the Standard is determined by agreement between the builder and the verifier. National Green Building Certification through the NAHB Research Center costs $200 per home for NAHB members and $500 per home for non-members.

For more information, please contact us at www.nahbgreen.org/ContactUs.

NAHB RESEARCH CENTER[SM]

National Green Building Certification

Turning Over a New Leaf: The Greening of Remodeling

In many ways, there couldn't be a better time for green remodeling. Lower housing values are causing more people to stay in place; rising energy prices have caused homeowners to take a closer look at operating costs and ways to reduce the financial burden of high utility bills; and the federal tax credits for energy-efficient windows and heating and cooling systems are providing further stimuli for remodeling opportunities.

Further, the environmental benefits for green home remodeling can be notable. Old homes are notoriously leaky, which causes conditioned air to escape and heating and cooling systems to work harder. This is compounded by the fact that many older homes are equipped with inefficient heating and cooling systems and outfitted with inefficient faucets, toilets, appliances, and showerheads.

Faced with the challenge of remodeling older homes to be "greener," remodelers were left out of the growing number of green building programs. Even nationally recognized programs did not provide an opportunity for green remodeling projects to be certified as green ... until now.

The National Green Building Standard

The National Green Building Standard provides a credible industry benchmark and scoring process for green remodeling and renovation projects. The Standard was developed through an open, consensus-based process allowing full participation of all interested stakeholders. It is also the first green building rating system to be ANSI-approved, making it the benchmark for green residential construction. The Standard recognizes a wide variety of green practices, which can be incorporated into residential construction and renovation on a national scale, and encourages homeowners to operate and maintain their homes in an environmentally responsible manner.

Green Remodeling Step-By-Step

The National Green Building Standard provides in-depth guidance for green remodeling and a basis for scoring green remodeling projects.

There are two possible remodeling paths to green certification. Homes built after 1980 follow the same path to green certification as newly-constructed homes. For homes built before 1980, a remodeler can choose to follow the certification process for new home construction or the Green Remodel Path. Both paths allow certification at the Bronze, Silver, Gold, and Emerald levels for either single-family or multi-unit homes. Remodelers should fully explore both paths and evaluate which path best meets their needs from the perspectives of features, performance, and cost.

Green Remodel Path

The Green Remodel path applies only to buildings for which the original building permit was issued prior to January 1, 1980. The Green Remodel Path has only three required elements:

- Achieving a certain reduction in energy usage
- Achieving a certain reduction in water usage
- Complying with five mandatory indoor environmental quality practices

The reduction in energy and water consumption must range from a minimum of 20% for Bronze to at least 50% for Emerald-level certification. A qualified professional must audit or analyze the water and energy usage before and after the remodel. The same approach to the audit/analysis must be used for both the before and after studies. The remodeler should be sure to contract with the verifier to assess the condition of the building for the "before" energy and water analysis before the renovation begins. The verification process will require a very brief inspection to verify the indoor environmental quality practices, along with a review of the energy and water analysis. The Green Remodel can be used for renovations that include an addition, but if the addition is significant in size, it may be difficult to meet the energy and water reduction thresholds.

Green Building Path

This path requires a remodeler to incorporate green practices into the remodeling process. Each practice earns points or meets certain mandatory requirements toward certification. There are minimum threshold points in each of six green building categories, as well as an overall total for each certification level. There are several hundred practices to choose from, but you need only enough practices to accumulate threshold points for the desired level of green certification. The practices in this path are generally the same as the practices for new construction, but some are modified specifically for renovation. The Standard's Renovation Notes often provide additional points toward certification. A Green Building Path renovation requires two inspections by an accredited verifier for certification. Remodelers can use the online Green Scoring Tool, a free, easy-to-use software application available at www.NAHBGreen.org, to streamline the process of greening a remodeling project. The software is designed to guide users through the green requirements step-by-step.

Third-party Verification

Visual third-party verification of the green features in every project that earns the Green Certified mark is a hallmark of the NAHB Research Center's National Green Building Certification. Verifiers accredited by the Research Center must independently confirm, through a process of document review and on-site inspections, that all green certification requirements and points specified by a remodeler are in place for a candidate home. Self-certification is not allowed. This is the cornerstone of the certification's credibility. Accredited verifiers are listed by state on the NAHBGreen website.

Cost to Remodel Green

The additional costs to remodel a home to any green building rating system fall into three categories. First, there may be additional costs for the building products that comply with the green practices. These costs will vary widely by project, but aren't necessarily significant. The second category of costs is for the project's verification. Verifier fees vary by market and are negotiated between the remodeler and the verifier. Finally, to earn national recognition of the project's green features, there is a certification fee. Fees for National Green Building Certification were designed to be affordable to a broad range of remodeling projects. For NAHB members, the remodeling project certification fee is $200 per single-family unit, or $200 per building plus $20 per unit for multifamily projects.

For more information, please contact us at www.nahbgreen.org/ContactUs.