



National Center for Healthy Housing

For Immediate Release

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New Voluntary Green Guidelines Seek to Protect Residents from Health Hazards in Their Homes – Optional Protections May Undermine Health Benefits

November 9, 2007 (Columbia, MD)—In an analysis of the recently-released national green building guidelines, the National Center for Healthy Housing (NCHH) today praised new criteria designed to protect families from health hazards inside the home, but urged that the protections be mandatory and not optional.

This week the U.S. Green Building Council unveiled its latest version of LEED-H or Leadership in Energy and Environmental Design for Homes at the GreenBuild Conference in Chicago, IL. The voluntary initiative seeks to move the mainstream home building industry toward more environmentally sustainable practices.

NCHH criticized a 2005 version of the program for not going far enough to protect residents from hazards such as mold, pesticides, and radon.

“Green means healthy to most consumers. Yet our review of the LEED-H program showed that it stopped short of requiring many construction practices that could protect families from hazards in their homes,” said Rebecca Morley, executive director of NCHH.

According to NCHH, the newest version makes several important improvements, yet is still wanting in several areas.

The guidelines call for radon mitigation in areas classified as “Zone 1” by the U.S. Environmental Protection Agency (EPA). EPA and NCHH recommend extending such mitigation to “Zone 2” regions as well, since radon may be found in any home.

Exposure to radon is the leading cause of lung cancer for non-smokers and is the second leading cause of lung cancer overall and is responsible for approximately 21,000 lung cancer deaths per year.

According to Morley, “The latest version of LEED-H will help protect families from mold and moisture, pesticide exposure, and carbon monoxide. Yet too often, the indoor environmental

elements are optional. This places responsibility for creating a green and healthy home environment in the hands of builders, who may not understand the health implications of their choices.”

To help builders and consumers understand the importance of incorporating health protections into housing construction, maintenance, and renovation, NCHH developed a summary of the strengths and weaknesses of the new program. Builders can choose to augment their practices with additional healthy homes upgrades to distinguish themselves in the marketplace and respond to consumer demand for healthier homes.

For a copy of NCHH’s analysis, go to www.nchh.org.

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NCHH is the only national scientific and technical non-profit organization dedicated to developing and promoting practical measures to protect children from residential environmental hazards while preserving affordable housing. NCHH develops scientifically valid and practical strategies to make homes safe from hazards, to alert low- income families about housing-related health risks, and to help them protect their children. NCHH also works with governmental and non-governmental organizations to develop standards and programs and guide their implementation through insurers, lenders, federal and state laws and regulations, community organizations, and the courts.

NCHH Summary Analysis of November 2007 LEED-H Guidelines

NCHH noted the following program strengths in its analysis:

Moisture Reduction:

In 2004, the National Academy of Sciences concluded that there is a clear association between damp indoor environments and respiratory problems, including asthma in sensitive persons. The American Lung Association reports that over 20 million people in the United States suffer from asthma and 4,000 people die of asthma each year.

LEED-H will now require:

- Clothes dryers must exhaust to the exterior to remove moist air from the dryer.
- No carpets in wet areas (i.e. kitchens, baths, laundry rooms, and spas) to mold growth, pests, and other asthma triggers.
- No paper-faced backer board on wet area walls (i.e. tubs, showers, and spas). Moisture problems hidden in walls behind tubs, showers and spas can cause mold growth, pest infestation and structural problems.

Combustion Controls:

Unvented appliances release combustion pollutants, such as carbon monoxide, nitrogen dioxide, particulates, and sulfur dioxide directly into the home. The health effects from exposure to combustion pollutants range from headaches and breathing difficulties to death. There are about 500 deaths from non-fire related carbon monoxide poisonings in the home each year.

LEED-H:

- Prohibits unvented combustion appliances
- Requires the installation of carbon monoxide alarms on each floor
- Requires all fireplaces and woodstoves have doors; and requires that space and water heating equipment be designed and installed with a) closed combustion, b) a power vented exhaust or c) is located in a detached building or open air facility.

Pest Control:

Many pesticides pose health risks to humans, depending on the type of pesticide and amount of exposure. In 2003, Poison Control Centers reported 113,000 cases of pesticide poisoning. Health risks can include skin or eye irritation, effects to the endocrine system and increased risk of cancer.

LEED-H:

- Includes credits for nontoxic pest control and details five physical actions that can be implemented during construction. Incorporating these strategies in home construction can reduce the need for pesticides.

NCHH Noted the Following Weaknesses:

Radon Mitigation

Radon is the leading cause of lung cancer for non-smokers and is the second leading cause of lung cancer overall. It is responsible for 21,000 lung cancer deaths per year.

LEED-H should require:

- Radon controls for EPA Zone 2 areas, since these areas also have a significant risk for radon exposure. EPA recommends radon resistant construction in Zone 2 unless there is state or local evidence that the local radon risk is low.

Moisture Control:

According to the 2005 American Housing Survey, 10.7% of homes had water leaks from the exterior in the previous 12 months. Water leakage can lead to mold growth, which is associated with health problems, particularly for susceptible individuals, and can cause structural damage to the home.

LEED-H should require:

- Water management around the foundation. Simple steps such as directing gutters and downspouts to flow onto splash blocks or a proper drainage system can divert water drainage away from the building and prevent water infiltration.
- The extension of eaves to keep water away from the building.
- Effective flashing on rough openings, such as windows and doors.

Contaminant Controls:

Formaldehyde exposure can cause eye, nose and throat irritation, coughing, headaches, dizziness, and nausea. EPA has listed formaldehyde as a possible cancer-causing chemical. Volatile Organic Compounds (VOCs) have been linked to eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidney, and central nervous system. Many organic compounds are known to cause cancer in animals; some are suspected of causing, or are known to cause, cancer in humans.

LEED-H should require:

- The use of wood free of urea formaldehyde or sealed with a low-VOC water-based sealant.
- Permanent walk-off mats or storage space for shoes to reduce track-in of contaminants such as lead contaminated soil and pesticides into the living space.
- The Carpet and Rug Institute's Green Label Plus program when carpets are installed to reduce off-gassing from carpets.

Injury Prevention:

Over half of the 2.4 million annual calls to Poison Control Centers are for children less than 6 year of age, while more than a third of adults 65 and older fall each year in the United States with over 433,000 of these older adults hospitalized because of these falls.

LEED-H should require:

- Safety measures as credits to its criteria. For example, homes where children may reside should include lockable medicine cabinets while homes where seniors may live should include grab bars in bathrooms.
- Smoke Free Environments in multi-family properties or credits for meeting LEED-NC. According to a recent US Surgeon General report (2006), exposure to second hand tobacco smoke increases the risk of serious respiratory problems in children (e.g., asthma), middle ear

infections, and heart disease in non smoking adults. It is also a known human carcinogen (cancer-causing agent). The LEED-H standard applies to residential structures 4 stories and below that often are multi- family apartment buildings. LEED-NC requires non-smoking environments or substantial controls to prevent the movement of environmental tobacco smoke from one portion of the building to another.