

VI.

Summary of Findings

LEED Standards Are Being Adopted into Many Laws

Green Building Council standards are being incorporated into federal, state and local laws through legislation, executive orders, resolutions, policies, loan-granting criteria and tax credits. As demonstrated in this report, LEED standards are clearly insufficient to protect human health, yet they are being adopted by many levels of government as law. Thus the Green Building Council, a trade association for the building industry, is effectively structuring the regulations. The number of jurisdictions adopting these standards as law is growing, which will make them difficult if not impossible to change, unless federal law and regulation supersede the “green” standards with health-protective regulations.

No Federal Definition or Regulation of Green Building Standards

There is no federal definition of “green building standards” analogous to federal “organic food standards” or drinking water standards. Given regulatory neglect, many trade organizations have worked to create their own certification programs, hoping to capture growing demand for environmentally friendly and health-protective buildings.

Energy Efficiency Given Priority Over Health

The LEED credit system is heavily weighted to encourage energy-efficient building performance. Nearly four times as many credits are awarded as energy conservation technologies and designs (35 possible credits) as for protection of indoor environmental quality from hazardous chemicals (8 possible credits).

Green Building Council Board Has Little Expertise in Environmental Health

Directors of the LEED Program are predominantly engineers, architects, developers, real estate executives, chemical industry officials and building product manufacturers. One medical doctor representing Physicians for

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Social Responsibility was recently appointed to sit on the board, which has 25 directors.

False Impression of Healthy Buildings

The Green Building Council's award of "platinum," "gold," and "silver" status conveys the false impression of a healthy and safe building environment, even when well-recognized hazardous chemicals exist in building products.

Time Spent Indoors

Americans today are spending more than 90 percent of their time indoors. The EPA spends the majority of its resources working to manage outdoor threats to environmental quality and human health.

Tighter Buildings Increase Human Exposure

Energy conservation efforts have made buildings tighter, often reducing air exchange between the indoors and outdoors. Since outdoor air is often cleaner than indoor air, the reduction of outdoor-indoor exchange tends to concentrate particles, gases and other chemicals that can lead to more intense human exposures than would be experienced in better-ventilated environments.

However, the LEED program has been effective in encouraging more efficient heating and ventilation techniques, such as solar panels, geothermal wells, window placement and building orientation.

Toxic Chemicals in Built Environments

Tens of thousands of different building materials and products are now sold in global markets. Many of these products contain chemicals recognized by the U.S. National Toxicology Program, the CDC, or the World Health Organization to be hazardous.

These products include pesticides, chemical components of plastics, flame retardants, metals, solvents, adhesives and stain-resistant applications.

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Some are carcinogens, neurotoxins, hormone mimics, reproductive toxins, developmental toxins, or chemicals that either stimulate or suppress the immune system.

Chemicals in Buildings Are Often Found in Human Tissues

The CDC began testing human tissues to determine the presence of some chemical ingredients of building materials. Most individuals whose tissues were tested carried dozens of these chemicals in their hair, blood or urine. Children often carry higher concentrations than adults. Chemicals released by building materials to indoor environments may be inhaled, ingested or absorbed through the skin.

No Level of LEED Certification Assures Health Protection

It is possible for new construction to be certified at the “platinum” level with no credits awarded for air quality assurance in the category “indoor environmental quality.”

LEED Neglects Drinking Water Quality

The only drinking water quality assurance that LEED requires is compliance with federal Safe Drinking Water Act (SDWA) standards. Yet these standards are widely recognized to allow human exposure to hazardous chemicals above “maximum contamination limits” set to protect human health.

In addition, the SDWA standards do not apply to wells that provide water to fewer than 15 households, as these require no water testing, leaving nearly 40 million people with no legal protection. Similarly, pesticides may be used within buildings and on grounds, with no regard for groundwater contamination.

LEED Neglects Workers’ Occupational Risks

LEED neglects to address the occupational chemical risks faced by workers who manufacture building products, cleaning products and furnishings.

The Central Problem: Federal Failure to Test and Regulate

Hazardous chemicals have become components of LEED-certified indoor environments primarily due to the failures of the Toxic Substances Control Act (TSCA) and EPA's neglect of the problem. Congress has provided EPA with limited authority to require testing of likely hazardous chemicals in building products.

Among nearly 80,000 chemicals in commerce, EPA has required toxicity testing of only 200 in nearly 25 years since TSCA was passed. These test results led EPA to ban or phase out only five chemicals. The overwhelming majority of chemicals in the built environment remain untested individually or as chemical mixtures that are routinely released to indoor environments.

Thus new products may incorporate tens of thousands of untested chemicals with no government oversight. This absence of regulation contrasts sharply with more stringent federal statutes that govern pesticides, industrial emissions to outdoor environments, pharmaceuticals and food. Since TSCA places the burden of proof of hazard on EPA before it may regulate, nearly all chemicals in building materials have escaped federal testing and regulation.

LEED Credit System—Something For All, Guarantees for None

LEED provides credits in many categories unrelated to human health. In establishing such a diverse set of criteria—energy, materials and resources, site reuse, and so forth—each category accounts for a relatively small percentage of the total credit award. The design of the existing credit system provides opportunities for awards in many different categories.

The outcome is that low performance, or omissions in one or more categories, can result in even the most prestigious certification level.