



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

18 February 2000

OFFICE OF
AIR AND RADIATION

Christine Ervin
President and Chief Executive Officer
The U.S. Green Building Council
110 Sutter Street, Suite 410
San Francisco, CA 94106-4026

Reference: LEED Green Building Rating System™ 2.0-Balloon Version

Dear Ms. Ervin:

The EPA applauds your good work in pursuing energy and environmental benefits through the referenced rating system, and specifically in promoting the phaseout of ozone-depleting substances. However, we need to bring to your attention a concern that we have with one of your credit requirements under the Energy and Atmosphere section of the rating system.

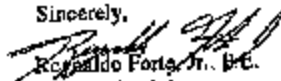
Energy Credit 4 under Energy and Atmosphere requires the installation of building level HVAC and refrigeration equipment and fire suppression systems that do not contain HCFC's or Halon. The intent for this requirement is in line with the Agency's priorities in phasing out ozone-depleting substances in compliance with the Montreal Protocol. However, we take exception with the inclusion of HCFCs as part of this credit requirement. The Agency believes that in the specific sector end-use of building chillers, encouraging that HCFCs do not be installed will not necessarily lead into energy efficiency or environmental design improvements. This credit requirement is also in disagreement with our Significant New Alternatives Policy (SNAP) decision, which lists HCFC-123 as an acceptable substitute in centrifugal chillers.

In this specific end use we have found that choosing a system based solely on its refrigerant is not necessarily the best for the overall environment, and that the optimal choice is to consider all alternatives as acceptable and viable alternatives. Please see our enclosed Technology Brief on "Choosing the Optimal Chiller in the Face of a CFC Phaseout." For instances, while the HCFC used in low-pressure chillers may provide a small contribution to ozone-depletion, its global warming potential is much lower than that of most other refrigerants, and it offers a high thermodynamic efficiency, which usually translates into highly-efficient systems. Other chiller refrigerants or designs will impact the environment differently, however there is not a clear best alternative, and

discouraging the use of HCFC chillers may steer building owners away from an environmentally acceptable choice.

Please feel free to contact me for further discussions on this subject at (202) 564-9134 or by electronic mail at fortc.reynaldo@epa.gov.

Sincerely,


Reynaldo Fortes, Jr., B.E.
Technical Advisor
Stratospheric Protection Division



The Alliance
for Responsible Atmospheric Policy
2111 WILSON BOULEVARD, SUITE 850
ARLINGTON, VIRGINIA 22201
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February 18, 2000

Ms. Christine Ervin
President and Chief Executive Officer
The U.S. Green Buildings Council
110 Sutter Street, Suite 410
San Francisco, CA 94106-4026

Dear Ms. Ervin:

I am writing on behalf of the Alliance for Responsible Atmospheric Policy to express our concern for the Council's LEEDS building rating system. The rating system is designed to encourage the construction of environmentally sensible buildings, however, we believe that it causes confusion in its treatment of HCFC compounds used as refrigerants and blowing agents.

The rating system treats fully-halogenated compounds such as CFCs and halons, in the same manner as HCFCs. HCFC compounds are 90-98% better than CFCs from the ozone depletion perspective. These compounds have been recognized as key transition compounds for purposes of compliance with the Montreal Protocol, and are important in the continued energy efficiency improvements of buildings, both from the perspective of air conditioning or refrigeration system operations as well as for insulating foams.

This unfortunate, and we believe inappropriate, treatment has now caused considerable confusion among government purchasing offices and among building code officials.

Members of the Alliance for Responsible Atmospheric Policy have been at the forefront of efforts to protect the Earth's stratospheric ozone layer and to introduce technologies that are environmentally beneficial and energy efficient. These technologies, including HCFC technologies, are important for our efforts to improve energy efficiency around the globe. The LEEDS building rating system is a disservice to these technology providers and policy officials charged with making either policy decisions or purchasing decisions.

To the extent that the rating system is misused, either intentionally or by mistake, it has the potential to cause economic harm to environmentally responsible industries and could result in product choices that are not as environmentally beneficial. Such misuse also brings into question the credibility of the Green Buildings Council, and its activities. We

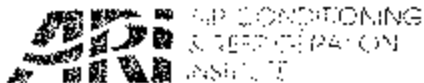
would like to discuss this matter with you at the earliest possible moment to determine what can be done to correct this matter in an expeditious timeframe.

I will contact you in the near future to arrange for a meeting. If your travel schedule will bring you to the Washington area any time in the near future, please let me know so that we can arrange a meeting with a group of industry representatives to discuss our concerns.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bob Russell".

Bob Russell
Chairman



Representative Manufacturers
of Heating, Ventilation,
& Air Conditioning
Equipment Industry

June 15, 2000

Christine Ervin
President and CEO
U.S. Green Building Council
110 Sutter Street
Suite 410
San Francisco, CA 94104

Dear Christine:

The Air-Conditioning and Refrigeration Institute (ARI) would like to express its continuing concern about the U.S. Green Building Council's (USGBC) "Leadership in Energy and Environmental Design" (LEED) rating system which discriminates against refrigerants approved under the United States Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) program.

As you know, EPA recognizes both hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs), for purposes of compliance with the Montreal Protocol, and as a way to successfully transition from much more environmentally damaging chlorofluorocarbons (CFCs). We would encourage the U.S. Green Building Council to adopt language that is consistent with the EPA definition and include *all* acceptable refrigerants.

By way of background, the Air-Conditioning and Refrigeration Institute is a national trade association representing the manufacturers of over 90% of U.S. produced air conditioning and commercial refrigeration equipment. ARI represents a domestic industry of over 240 air conditioning and refrigeration companies, employing approximately 150,000 men and women in the United States. The total value of member shipments by these companies is over \$30 billion annually.

Our industry has been at the forefront of developing more energy efficient and environmentally sound equipment. In fact, in the last six years, our industry has received recognition from the EPA for its efforts. We do feel, however, that certain refrigerants have not received your full consideration of the benefits that they provide.

USGBC places a premium on giving project teams maximum flexibility for selecting technologies and strategies to meet their own building needs. Project teams need to have *all* acceptable alternatives available to select the best equipment and materials for their project. Instead of enhancing project team flexibility, Energy Credit #4 limits project team flexibility.

Therefore, we request that your Board of Directors act immediately to overturn the approval of a motion on March 31, 2000 to retain Energy Credit #4 in the LEED™ 2.0 rating system and consider a new motion to delete Energy Credit #4 from the LEED™ 2.0 rating system.

Thank you.

Sincerely,

A handwritten signature in cursive script that reads 'Deborah E. Miller'.

Deborah E. Miller
Vice President
Government Affairs

**Alliance to Save Energy and
American Council for an Energy-Efficient Economy**

August 10, 2000

Ms. Christine Ervin, CEO
U.S. Green Building Council
110 Sutter Street, Suite 410
San Francisco, CA 94104

Dear Ms. Ervin:

The Alliance to Save Energy and the American Council for an Energy-Efficient Economy ask that the U.S. Green Building Council eliminate the credit in its LEED Commercial green building rating system for avoidance of HCFC chiller refrigerants. Our analysis shows that this credit penalizes a class of refrigerants that have both low ozone-depletion potential and high energy-efficiency potential. In our view, any small impacts from HCFC chiller refrigerants on ozone depletion are substantially outweighed by their carbon emission reduction potential. Our position statement on this issue is attached.

We recommend that U.S. GBC use the Total Equivalent Warming Impact (TEWI) method when comparing the potential impacts of alternative refrigerants. We believe that this approach provides the most balanced way to mitigate the risks of climate impacts from refrigerant choices.

While this letter addresses the issue of commercial chiller refrigerants in the LEED Commercial rating system, this issue also applies to other building components, such as HCFC foam-blown insulation use in building shells and residential appliances, and HCFC residential appliance refrigerants. The one-time ozone depletion benefit of avoiding the use of HCFC-blown insulation, for example, is typically more than outweighed by the potential carbon emissions impact of using lower-performance insulation products over the life cycle of the building. We therefore also urge U.S. GBC to eliminate or avoid other credits for the avoidance of HCFCs in its current and planned LEED rating systems.

We will be happy to expand this conversation as the LEED rating systems evolve. Please contact Bill at the Alliance (202-530-2214, bprindle@ase.org) or Howard at ACEEE (202-429-8873, hgeller@aceee.org) for further discussion. Thank you for your consideration.

Sincerely,

Howard Geller
Executive Director
American Council for an Energy-
Efficient Economy

William R. Prindle
Director of Buildings and Utilities Programs
Alliance to Save Energy

Cc: Steven Winter, Chairman
U.S. Green Building Council

Enclosure

August 9, 2000

Steven Winter
Chairman, US Green Building Council
50 Washington Street
Norwalk, CT 06854 Fax: 203/852-0741

Christine Ervin
CEO, US Green Building Council
927 NW 24th Avenue, #1
Portland, OR 97210 Fax: 240/282-7694

Colleagues,

The Natural Resources Defense Council (NRDC) is writing to request that the US Green Building Council (USGBC) open a review of the Energy and Atmosphere Credit 4: Elimination of HCFCs and Halons. NRDC supports the removal of HCFCs from the requirements of the credit, while retaining Halons.

We are concerned that the presence of HCFCs in this credit may result in fewer environmental benefits in many cases. HCFCs only have an ozone depletion potential (ODP) 1-5% of CFCs and with today's modern chiller technology virtually no releases are likely with normal usage. By contrast, Halons have an ODP three to ten times higher than CFC-11 & 12 and are released in significant quantities in fire suppression events.

We are concerned that projects using lower efficiency non-HCFC chiller equipment would not be able to achieve a marginal point for energy efficiency under Energy and Atmosphere Credit 1, instead opting for the point under Credit 4. The environmental benefit represented by the extra point in energy efficiency is significantly larger than the environmental benefit conveyed by the use of a non-HCFC chiller. This seems contrary to the intent of LEED to maximize the environmental performance of buildings.

NRDC looks forward to working with the USGBC to reconcile this complex and difficult question.

Sincerely,

David B. Goldstein, Ph.D.
Senior Scientist, Natural Resources Defense Council
