ANSI/ASHRAE/IES Addenda dg, di, dj, dk, and dl to
ANSI/ASHRAE/IESNA Standard 90.1-2007

ASHRAE ADDENDA

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by the ASHRAE Standards Committee on June 20, 2010; by the ASHRAE Board of Directors on July 24, 2010; by the IES Board of Directors on July 26, 2010; and by the American National Standards Institute on July 26, 2010.

These addenda were approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE Web site (www.ashrae.org) or in paper form from the Manager of Standards.

The latest edition of an ASHRAE Standard may be purchased on the ASHRAE Web site (www.ashrae.org) or from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 404-321-5478. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in US and Canada). For reprint permission, go to www.ashrae.org/permissions.

© Copyright 2010 American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

ISSN 1041-2336

Approved American National Standard
ANSI
www.ansi.org

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
1791 Tullie Circle NE, Atlanta, GA 30329
www.ashrae.org

ASHRAE STANDING STANDARD PROJECT COMMITTEE 90.1
Cognizant TC: TC 7.6, Systems Energy Utilization
SPLS Liaison: Doug Reindl · ASHRAE Staff Liaison: Steven C. Ferguson · IESNA Liaison: Rita M. Harrold

Mr Michael CA Schwedler*	Chair
Mr Mark M Hydeman*	Co-Vice Chair
Mr Stephen V Skalko, PE*	Co-Vice Chair
Ms Susan Isenhour Anderson*	Member
Mr Wagdy A Y Anis, FAIA*	Member
Mr Peter A Baselici*	Member
Mr Jeffrey G Boldt*	Member
Mr David J Branson*	Member
Mr Keith I Emerson*	Member
Mr Drake H Erbe*	Member
Mr James A Garrigus*	Member
Mr Jason John Glazer*	Member
Mr Pekka Hakkarainen*	Member
Mr Richard Heinisch*	Member
Mr Ned B Heminger*	Member
Mr John F Hogan, AIA, PE*	Member
Mr Hyman M Kaplan*	Member
Mr Michael D Lane, LC*	Member
Mr Richard Lord*	Member
Mr Ronald Majette*	Member
Dr Itzhak H Maor, PHD*	Member
Mr James Patrick McClendon*	Member
Mr Michael W Mehl*	Member
Mr Harry P Misuriello*	Member
Mr Frank T Morrison*	Member
Mr Timothy M Peglow*	Member
Mr Eric E Richman*	Member
Mr Leonard C Sciarra*	Member
Dr Maria Spinu*	Member
Mr Christian R Taber*	Member
Mr Michael Tillou*	Member
Ms Martha G VanGeem, PE*	Member
Mr Michael Waite*	Member
Mr Mchenry Wallace, Jr*	Member
Mr Richard D Watson*	Member
Mr Jerry W White, Jr*	Member
Mr Ron Burton*	Organizational
Mr Charles C Cottrell*	Organizational
Mr S Craig Drumheller*	Organizational
Mr Allan B. Fraser*	Organizational
Mr Ronald D Kurtz*	Organizational
Mr Steven Rosenstock, PE*	Organizational
Mr Frank A Stanonik*	Organizational
Mr Ernest A Conrad	Alternate Org
Mr Chad Groshart	Alternate Org
Dr Merle F McBride	Alternate Org
Mr Kenneth Sagan	Alternate Org
Mr Randall Blanchette	Subcommittee
Mr Donald M Brundage, PE	Subcommittee
Mr Brian David Hahnlen	Subcommittee
Ms Susanna S Hanson	Subcommittee
Mr Jonathan Humble	Subcommittee
Mr Raymond Frank McGowan	Subcommittee
Mr Michael I Rosenberg	Subcommittee
Ms Martha (Marty) Gail Salzberg	Subcommittee
Mr Jeffrey R Stein	Subcommittee
Mr Wayne Stoppelmoor	Subcommittee
Mr William J Talbert	Subcommittee
Mr Daniel J Walker, PE	Subcommittee

**Denotes members of voting status when the document was approved for publication.*

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

ASHRAE STANDARDS COMMITTEE 2009–2010

Steven T. Bushby, *Chair*
H. Michael Newman, *Vice-Chair*
Robert G. Baker
Michael F. Beda
Hoy R. Bohanon, Jr.
Kenneth W. Cooper
K. William Dean
Martin Dieryckx
Allan B. Fraser
Katherine G. Hammack
Nadar R. Jayaraman
Byron W. Jones
Jay A. Kohler
Carol E. Marriott
Merle F. McBride
Frank Myers
Janice C. Peterson
Douglas T. Reindl
Lawrence J. Schoen
Boggarm S. Setty
Bodh R. Subherwal
James R. Tauby
James K. Vallort
William F. Walter
Michael W. Woodford
Craig P. Wray
Wayne R. Reedy, *BOD ExO*
Thomas E. Watson, *CO*

Stephanie Reiniche, *Manager of Standards*

SPECIAL NOTE

This American National Standard (ANS) is a national voluntary consensus standard developed under the auspices of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). *Consensus* is defined by the American National Standards Institute (ANSI), of which ASHRAE is a member and which has approved this standard as an ANS, as "substantial agreement reached by directly and materially affected interest categories. This signifies the concurrence of more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution." Compliance with this standard is voluntary until and unless a legal jurisdiction makes compliance mandatory through legislation.

ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

ASHRAE Standards are prepared by a Project Committee appointed specifically for the purpose of writing the Standard. The Project Committee Chair and Vice-Chair must be members of ASHRAE; while other committee members may or may not be ASHRAE members, all must be technically qualified in the subject area of the Standard. Every effort is made to balance the concerned interests on all Project Committees.

The Assistant Director of Technology for Standards and Special Projects of ASHRAE should be contacted for:

a. interpretation of the contents of this Standard,
b. participation in the next review of the Standard,
c. offering constructive criticism for improving the Standard, or
d. permission to reprint portions of the Standard.

DISCLAIMER

ASHRAE uses its best efforts to promulgate Standards and Guidelines for the benefit of the public in light of available information and accepted industry practices. However, ASHRAE does not guarantee, certify, or assure the safety or performance of any products, components, or systems tested, installed, or operated in accordance with ASHRAE's Standards or Guidelines or that any tests conducted under its Standards or Guidelines will be nonhazardous or free from risk.

ASHRAE INDUSTRIAL ADVERTISING POLICY ON STANDARDS

ASHRAE Standards and Guidelines are established to assist industry and the public by offering a uniform method of testing for rating purposes, by suggesting safe practices in designing and installing equipment, by providing proper definitions of this equipment, and by providing other information that may serve to guide the industry. The creation of ASHRAE Standards and Guidelines is determined by the need for them, and conformance to them is completely voluntary.

In referring to this Standard or Guideline and in marking of equipment and in advertising, no claim shall be made, either stated or implied, that the product has been approved by ASHRAE.

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This text adds a definition for the term "field-fabricated fenestration" used in section 5.4.3.2, consistent with Interpretation IC 90.1-2007-01 and similar language in California's Title 24.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum dg to 90.1-2007

Revise the Standard as follows (I-P and SI units).

Add new definition to section 3.2:

fenestration, field-fabricated: *fenestration* whose frame is made at the construction site of materials that were not previously cut, or otherwise formed with the specific intention of being used to fabricate a *fenestration* product or exterior glazed *door. Field fabricated fenestration* does not include site-built *fenestration* designed to be glazed or assembled in the field using specific factory cut or otherwise factory formed framing and glazing units, such as storefront systems, curtain walls, and atrium roof systems.

Modify Appendix G, Table G3.1 #5 proposed building as follows:

e. Automatically controlled dynamic glazing may be modeled. Manually controlled dynamic glazing shall use the average of the minimum and maximum SHGC and VT.

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

The 1999 standard had a mandatory requirement:

6.2.3.5 Enclosed Parking Garage Ventilation. Garage ventilation fan systems with a total design capacity greater than 30,000 cfm shall be permitted to have at least one of the following:

a. An automatic control that is capable of staging fans or modulating fan volume as required to maintain carbon monoxide (CO) concentration below levels in ASHRAE 62. This option only applies to garages used predominantly by gasoline-powered vehicles.

b. An automatic control complying with 6.2.3.2.1 that is capable of shutting off fans or reducing fan volume during periods when the garage is not in use. (note:6.2.3.2.1 is Automatic Shutdown that shuts down the HVAC systems when the building is unoccupied.)

This section was removed in the 2001 addition because of liability concerns. The sensors and control systems have improved over time. The 2007 ASHRAE Handbook, HVAC Applications recommends that, "If permitted by local codes, the ventilation airflow rate should be varied to conserve energy."

The flow rates and concentrations in the new requirement are from the International Mechanical Code requirements. The proposed high level alarm is at 25 ppm, at 200 ppm a person would experience slight headache, tiredness, and dizziness after 2 to 3 hours.

The energy savings depends on the hours of operations and the use profile of the garage. In garages that have morning and afternoon peaks and low usage during the day, the handbook documents savings of 60% of fan power.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum di to 90.1-2007

Revise the Standard as follows (I-P units).

Add new definition to section 3.2:

ventilation system motor nameplate hp*:* the sum of the motor nameplate horsepower (hp) of all fans that are required to operate as part of the system.

Modify Section 6 as follows:

6.4.3.4.6 Enclosed Parking Garage Ventilation. Enclosed parking garage ventilation systems shall automatically detect contaminant levels and stage fans or modulate fan airflow rates to 50% or less of *design capacity* provided acceptable contaminant levels are maintained.

Exceptions:

a. Garages less than 30,000 ft^2 with ventilation systems that do not utilize mechanical cooling or mechanical heating

b. Garages that have a garage area to *ventilation system motor nameplate hp* ratio that exceeds 1500 ft^2/hp and do not utilize mechanical cooling or mechanical heating.

c. Where not permitted by the *authority having jurisdiction.*

6.7.2.2 Manuals. Construction documents shall require that an operating manual and a maintenance manual be provided to the building owner or the designated representative of the building owner within 90 days after the date of system acceptance. These manuals shall be in accordance with industry-accepted standards (see Informative Appendix E) and shall include, at a minimum, the following:

a. Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance.

b. Operation manuals and maintenance manuals for each piece of equipment and system requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified.

c. Names and addresses of at least one *service agency.*

d. HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field-determined setpoints shall be permanently recorded on control drawings at control devices or, for digital control systems, in programming comments.

e. A complete narrative of how each system is intended to operate, including suggested setpoints.

Revise the Standard as follows (SI units).

Add new definition to 3.2:

ventilation system motor nameplate kW*:* the sum of the motor nameplate kW of all fans that are required to operate as part of the system.

Modify Section 6 as follows:

6.4.3.4.6 Enclosed Parking Garage Ventilation. Enclosed parking garage ventilation systems shall automatically detect contaminant levels and stage fans or modulate fan airflow rates to 50% or less of *design capacity* provided acceptable contaminant levels are maintained.

Exceptions:

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

a. Garages less than 2787 m^2 with ventilation systems that do not utilize mechanical cooling or mechanical heating

b. Garages that have a garage area to *ventilation system motor nameplate kw* ratio that exceeds 187 m^2/kW and do not utilize mechanical cooling or mechanical heating.

c. Where not permitted by the *authority having jurisdiction*.

6.7.2.2 Manuals. Construction documents shall require that an operating manual and a maintenance manual be provided to the building owner or the designated representative of the building owner within 90 days after the date of system acceptance. These manuals shall be in accordance with industry-accepted standards (see Informative Appendix E) and shall include, at a minimum, the following:

a. Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance.

b. Operation manuals and maintenance manuals for each piece of equipment and systems requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified.

c. Names and addresses of at least one *service agency.*

d. HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field-determined setpoints shall be permanently recorded on control drawings at control devices or, for digital control systems, in programming comments.

e. A complete narrative of how each system is intended to operate, including suggested setpoints.

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

The current wording of Table 6.5.3.1.1B does not provide any limit on the pressure drop of energy recovery devices. This addendum limits the fan energy allowance for energy recovery devices to values that approximate the results of the economic analysis, with some allowance to permit adequate pressure drop for products near the minimum recovery effectiveness of 50%. A separate allowance is also created for coil runaround loop systems.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum dj to 90.1-2007

Revise the Standard as follows (I-P units).

Revise Table 6.5.3.1.1B as shown below:

TABLE 6.5.3.1.1B Fan Power Limitation Pressure Drop Adjustment

Device	Adjustment
Credits	
Fully ducted return and/or exhaust air systems	0.5 in w.c. (2.15 in w.c. for laboratory and vivarium systems)
Return and/or exhaust air flow control devices	0.5 in. w.c.
Exhaust filters, scrubbers, or other exhaust treatment.	The pressure drop of device calculated at fan system design condition
Particulate Filtration Credit: MERV 9 thru 12	0.5 in. w.c.
Particulate Filtration Credit: MERV 13 thru 15	0.9 in. w.c.
Particulate Filtration Credit: MERV 16 and greater and electronically enhanced filters	Pressure drop calculated at 2x clean filter pressure drop at fan system design condition.
Carbon and Other gas-phase air cleaners	Clean filter pressure drop at fan system design condition.
~~Heat Recovery Device,~~ Biosafety Cabinet	Pressure drop of device at fan system design condition.
Energy Recovery Device, other than Coil Runaround Loop	(2.2 x Energy Recovery Effectiveness) – 0.5 in w.c. for each airstream
Coil Runaround Loop	0.6 in. w.c. for each airstream
Evaporative Humidifier/Cooler in series with another cooling coil	Pressure drop of device at fan system design conditions
Sound Attenuation Section	0.15 in. w.c.
Exhaust System serving Fume Hoods	0.35 in. w.c.
Laboratory and Vivarium Exhaust Systems in High Rise Buildings	0.25 in. w.c./100 ft of vertical duct exceeding 75 ft.

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

Revise the Standard as follows (SI units). ***Revise Table 6.5.3.1.1B as shown below:***

TABLE 6.5.3.1.1B Fan Power Limitation Pressure Drop Adjustment

Device	Adjustment
Credits	
Fully ducted return and/or exhaust air systems	125 Pa (535 Pa for laboratory and vivarium systems)
Return and/or exhaust air flow control devices	125 Pa
Exhaust filters, scrubbers, or other exhaust treatment.	The pressure drop of device calculated at fan system design condition
Particulate Filtration Credit: MERV 9 thru 12	125 Pa
Particulate Filtration Credit: MERV 13 thru 15	225 Pa
Particulate Filtration Credit: MERV 16 and greater and electronically enhanced filters	Pressure drop calculated at 2x clean filter pressure drop at fan system design condition.
Carbon and Other gas-phase air cleaners	Clean filter pressure drop at fan system design condition.
~~Heat Recovery Device,~~ Biosafety Cabinet	Pressure drop of device at fan system design condition.
Energy Recovery Device, other than Coil Runaround Loop	(550 x Energy Recovery Effectiveness) – 125 Pa
Coil Runaround Loop	150 Pa for each airstream
Evaporative Humidifier/Cooler in series with another cooling coil	Pressure drop of device at fan system design conditions
Sound Attenuation Section	38 Pa
Exhaust System serving Fume Hoods	85 Pa
Laboratory and Vivarium Exhaust Systems in High Rise Buildings	60 Pa/30 meters of vertical duct exceeding 25 meters

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum adds clarity and instruction to the users of Appendix C, the envelope trade off option, for new requirements that were added in addendum "al", "bc" and "bn". Addendum al required skylights and lighting controls in certain occupancies, addendum bc required skylights and lighting controls in unconditioned semi-heated spaces and addendum bn dealt with orientation specific SHGC requirements.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum dk to 90.1-2007

Modify the Standard as follows (SI and I-P Units).

C3 BASE ENVELOPE DESIGN AND PROPOSED DESIGN SPECIFICATION

…

C3.4 For *enclosed spaces* required to comply with Section 5.5.4.2.3, the *skylight area* in the base envelope design shall be 3% of the *roof* area of that *enclosed space.* For *enclosed spaces* required to comply with Section 5.5.4.2.3, the total *daylight area under skylights* in both the base envelope design and the proposed envelope design shall be a minimum of half the floor area. For all other *spaces* ~~T~~the *skylight area* of each space category in the base envelope design shall be the same as the proposed envelope design ~~building~~ or the maximum allowed in Tables 5.5-1 through 5.5-8, whichever is less. This distribution of *skylights* among *space-conditioning categories* shall be the same as the proposed design. If the *skylight area* of any space category is greater than the maximum allowed in Tables 5.5-1 through 5.5-8 for that *space-conditioning category*, then the area of each *skylight* shall be reduced in the base envelope design by the same percentage so that the total *skylight area* is exactly equal to the maximum allowed in Tables 5.5-1 through 5.5-8.

C3.5 The *U-factor* for *fenestration* in the base envelope design shall be equal to the criteria from Tables 5.5-1 through 5.5-8 for the appropriate climate, except the *U-factor* for *skylights* in *enclosed spaces* required to comply with Section 5.5.4.2.3 shall be equal to the criteria listed in the Exception to Section 5.5.4.3. The *SHGC* for *fenestration* in the base envelope design shall be equal to the criteria from Tables 5.5-1 through 5.5-8. For portions of those tables where there are no SHGC requirements, or for *enclosed spaces* required to comply with Section 5.5.4.2.3, the *SHGC* shall be equal to 0.40 for all *vertical fenestration*, and 0.55 for *skylights*. The VT for *fenestration* in the base envelope design shall be equal to 1.10 times the *SHGC* criteria as determined in this subsection. For *enclosed spaces* required to comply with Section 5.5.4.2.3, the VT for *skylights* in that *enclosed space* shall be 0.40.

…

C3.7 *Unconditioned* spaces of the base envelope design and the proposed envelope design shall comply with Section 5.5.4.2.3.

…

C6 EQUATIONS FOR ENVELOPE TRADE-OFF CALCULATIONS

…

C6.2 Envelope Performance Factor. The *EPF* of a building shall be calculated using Equation C-2 using its actual orientation, rotating the entire building 90, 180, and 270 degrees, then averaging the results.

$$EPF = FAF \times [\Sigma HVAC_{surface} + \Sigma Lighting_{zone}] \quad (C\text{-}2)$$

where

FAF	=	floor area factor for the entire building
$\Sigma HVAC_{surface}$	=	sum of HVAC for each surface calculated using Equation C-3
$\Sigma Lighting_{zone}$	=	sum of lighting for each zone calculated using Equation C-4

© American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (www.ashrae.org).
For personal use only. Additional reproduction, distribution, or transmission in either print or
digital form is not permitted without ASHRAE's prior written permission.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum gives instruction to the users of Appendix C, the envelope trade off option on how to model the base envelope design and the proposed envelope design on how to comply with the cool roof provisions of Section 5.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum dl to 90.1-2007

Modify the Standard as follows (SI and I-P Units).

C3 BASE ENVELOPE DESIGN AND PROPOSED DESIGN SPECIFICATION

Sections C3.1 thru C3.5 do not change.

C3.6 The *roof* of the base envelope design and the *roof* of the proposed envelope design shall both comply with either section 5.5.3.1.2 (a) or (b).

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the standards and guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive technical committee structure, continue to generate up-to-date standards and guidelines where appropriate and adopt, recommend, and promote those new and revised standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating standards and guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.