

ADDENDA

**ANSI/ASHRAE/IES Addendum cc to
ANSI/ASHRAE/IES Standard 90.1-2022**

Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on October 31, 2025; and by the Illuminating Engineering Society on October 16, 2025.

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FOREWORD

Addendum cc is a routine update to Section 13 references to ensure the most current information is included with the 2025 edition of the standard.

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

Addendum cc to Standard 90.1-2022

Modify Section 13 as shown (I-P and SI).

Reference		Section
Air Conditioning, Heating and Refrigeration Institute (AHRI) 2311 Wilson Blvd., Arlington, VA 22201		
AHRI 210/240 (2017) with addendum 1	Unitary Air Conditioning and Air-Source Heat Pump Equipment (applicable before 1/1/2023)	Table 6.8.1-1, Table 6.8.1-2, Table F-1, Table G3.5.1, Table G3.5.2
AHRI 210/240-2023 (2020)	Unitary Air Conditioning and Air-Source Heat Pump Equipment (applicable on or after 1/1/2023)	Table 6.8.1-1, Table 6.8.1-8, Table 6.8.1-9, Table F-1
AHRI 310/380 (2017)	Packaged Terminal Air-Conditioners and Heat Pumps	Table 6.8.1-4, Table G3.5.4
AHRI 340/360 (I-P/2022)	Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment	Table 6.8.1-1, Table 6.8.1-2, Table G3.5.1, Table G3.5.2
ANSI/AHRI 365 (I-P/2009) (2024) (SI/I-P)	Commercial and Industrial Unitary Air-Conditioning Condensing Units	Table 6.8.1-1
AHRI 390 (I-P/2021)	Performance Rating of Single Packaged Vertical Air-Conditioners and Heat Pumps	Table 6.8.1-4
ANSI/AHRI 400 (I-P/2015) ANSI/AHRI 401 (SI/2015)	Performance Rating of Liquid-to-Liquid Heat Exchangers	Table 6.4.7
AHRI 410-2023 (SI/I-P)	Performance Rating of Forced-Circulation Air-Cooling and Air-Heating Coils	Table 6.4.7
AHRI 440 (I-P/2019) AHRI 441 (SI/2019)	Performance Rating of Fan-Coil Units	Table 6.4.7
ANSI/AHRI 460- (2005) (R2024) (SI/I-P)	Remote Mechanical Draft Air Cooled Refrigerant Condensers	Table 6.8.1-7
AHRI 550/590 (I-P/2020) (2023) (I-P) AHRI 551/591 (SI/2020) (2023) (SI)	Performance Rating of Water-Chilling and Heat-Pump Water-Heating Packages Using the Vapor Compression Cycle	6.4.1.2.1, 6.4.1.2.2.1, 6.4.1.2.2.2, 6.4.1.2.2.3, 6.4.1.2.2.4, Table 6.8.1-3, Table 6.8.1-16, Table G3.5.3
AHRI 560 (2000/2023)	<u>Absorption Water Chilling and Water Heating Packages Performance Rating of Water-cooled Lithium Bromide Absorption Water-chilling and Water-heating Packages</u>	Table 6.8.1-3

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ANSI/AHRI 840-2021 (I-P) ANSI/AHRI 841-2021 (SI)	Performance Rating of Unit Ventilators	Table 6.4.7
ANSI/AHRI 910- (I-P/2014) -2014 (R2023) (I-P) ANSI/AHRI 911- (SI/2014) -2014 (R2023) (SI)	Performance Rating of Indoor Pool Dehumidifiers	Table 6.8.1-12
ANSI/AHRI 920 (I-P/2020) with Addendum 1 ANSI/AHRI 921 (SI/2020) with Addendum 1	Performance Rating of DX-Dedicated Outdoor Air System Units	3.2, Table 6.8.1-13, Table 6.8.1-14
AHRI 1060 (I-P/2018) AHRI 1061 (SI/2018)	Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment	Table 6.4.7, 6.5.6.1.1(a), 6.5.6.1.2.1
ANSI/AHRI 1200- 2023 (I-P/ 2013) ANSI/AHRI 1201- 2023 (SI/ 2013)	Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets	Table 6.8.1-11, Table 12.5.1, Table G3.1, Table G3.10.1, Table G3.10.2
ANSI/AHRI 1230- 2023 (I-P/ 2014) (with Addendum 1)	Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment	Table 6.8.1-8, Table 6.8.1-9
ANSI/AHRI 1230 (I-P/2021)	Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment	Table 6.8.1-8, Table 6.8.1-9
AHRI Standard 1250 (I-P/2020)	Performance Rating of Walk-In Coolers and Freezers	Table 6.8.1-20
AHRI Standard 1300-2013 (R2023) (I-P/ 2013) AHRI Standard 1301-2013 (R2023) (SI/ 2013)	Performance Rating of Commercial Heat Pump Water Heaters	11.5.2.3.1
AHRI Standard 1360- 2022 (I-P/ 2017) AHRI Standard 1361- 2022 (SI/ 2017)	Performance Rating of Computer and Data Processing Room Air Conditioners	Table 6.8.1-10, Table 6.8.1-17
Air Movement and Control Association International (AMCA) 30 West University Drive, Arlington Heights, IL 60004-1806		
ANSI/AMCA 208-18	Calculation of the Fan Energy Index	3.2, 6.5.3.1.3, Table 6.8.1-21
ANSI/AMCA 220-21	Laboratory Methods of Testing Air Curtains for Aerodynamic Performance Ratings	10.4.5
ANSI/AMCA Standard 230- 1523 with errata	Laboratory Methods of Testing Air Circulating Fans for Rating and Certification	Table 6.8.1-21
ANSI/AMCA Standard 500-D-18	Laboratory Methods of Testing Dampers for Rating	Table 6.4.3.4.3
American Architectural Manufacturers Association (AAMA) Fenestration and Glazing Industry Alliance (FGIA) 1900 E. Golf Rd, Suite 1250, Schaumburg, IL 60173-4268 Canadian Standards Association (CSA) 78 Rexdale Blvd., Toronto, On, Canada M9W 1R3 Window and Door Manufacturers Association (WDMA) 2025 M Street, NW, Suite 800, 2001 K Street, NW, 3rd floor, Washington, DC 2003620006		
AAMA/WDMA/CSA 101/I.S.2/A440-17 (R2022)	NAFS-North American Fenestration Standard/Specification for Windows, Doors, and Skylights	Table 5.8.3.2
American Iron and Steel Institute (AISI) 25 Massachusetts Avenue, NW, Suite 800 Washington, DC 20001 Steel Framing Industries Association (SFIA) 513 W Broad St., Suite 210 Falls Church, VA 22046-3257		
ANSI/AISI S250-2021/S1-2022	North American Standard for Thermal Transmittance of Building Envelopes with Cold-Formed Steel Framing <u>with Supplement 1</u>	A2.5.3, A9.2
American National Standards Institute (ANSI) 1899 L Street, NW, 11th Floor, Washington, DC 20036		
ANSI Z21.47-2021/CSA 2.3-2021	Gas-Fired Central Furnaces	Table G3.5.5, Table 6.8.1-5

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ANSI Z83.8-2016/CSA 2.6-2016 (R2021)	Gas Unit Heaters, Gas Packaged Heaters, Gas Utility Heaters And Gas-Fired Duct Furnaces	Table G3.5.5, Table 6.8.1-5
American Society of Mechanical Engineers (ASME) Two Park Avenue, New York, NY 10016-5990		
ASME A17.1- 2019 2022/CSA B44-16	Safety Code for Elevators and Escalators	10.4.3.3, 10.4.4
ASHRAE 180 Technology Parkway, Peachtree Corners, GA 30092		
ANSI/ASHRAE Standard 51-2016	Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating	Table 6.5.3.7
ANSI/ASHRAE Standard 55- 2020 2023	Thermal Environmental Conditions for Human Occupancy	Table G3.1
ANSI/ASHRAE Standard 62.1-2022 with Addendum ab	Ventilation and Acceptable Indoor Air Quality	6.4.3.3.2, 6.4.3.3.5.1, 6.4.3.8, Table 6.4.3.8, 6.5.1, 6.5.2.1, 6.5.2.3, 6.5.3.2.1, 6.5.3.3, 6.5.3.8, 6.5.3.9, 6.5.6.1.2, 6.5.7.1, 11.5.2.2.7, 11.5.2.8.2, Table 12.5.2-1, G3.2.2.4, G3.2.2.5, Table L2.2.3
ANSI/ASHRAE Standard 62.2-2019	Ventilation and Acceptable Indoor Air Quality in Residential Buildings	6.5.3.8
ANSI/ASHRAE/IESNA Standard 90.1-2007	Energy Standard for Buildings Except Low-Rise Residential Buildings	6.4.1.2.1
ANSI/ASHRAE/IESNA Standard 90.1-2010	Energy Standard for Buildings Except Low-Rise Residential Buildings	6.4.1.2.1
ANSI/ASHRAE/IESNA Standard 90.1-2013	Energy Standard for Buildings Except Low-Rise Residential Buildings	6.4.1.2.1
ANSI/ASHRAE/IES Standard 90.1-2016	Energy Standard for Buildings Except Low-Rise Residential Buildings	6.4.1.2.1
ANSI/ASHRAE/IES Standard 90.1-2019	Energy Standard for Buildings Except Low-Rise Residential Buildings	6.4.1.2.1
ANSI/ASHRAE/IES Standard 90.4- 2019 2022 (with addenda a, b, d, e, and f)	Energy Standard for Data Centers	6.6.1, 6.6.2.1, 8.6.1, Table 11.5.1-1, 11.5.2.2.4
ANSI/ASHRAE Standard 140-2023	Method of Test for Evaluating Building Performance Simulation Software	12.4.1.4.1, 12.4.1.4.2, 12.7.2, C2.8, C3.1.4.1, C3.1.4.2, G1.3.2, G2.2.4.1, G2.2.4.2, L3.2.4.1, L3.2.4.2, L3.4
ANSI/ASHRAE Standard 154- 2016 2022	Ventilation for Commercial Cooking Operations	6.5.7.2.2
ANSI/ASHRAE Standard 169-2021	Climatic Data for Building Design Standards	5.1.5.1, 5.1.5.2
ANSI/ASHRAE/ASHE Standard 170-2021	Ventilation of Health Care Facilities	6.4.3.8, 6.5.3.8, 6.5.6.1.2, Table 11.5.1-1
ANSI/ASHRAE/ACCA Standard 183- 2007 (RA-2020)2024	Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings	6.4.2.1
ASHRAE/IES Standard 202- 2018 2024	Commissioning Process for Buildings and Systems	4.2.5.2, 4.2.5.2.2
ASHRAE Standard 241-2023	Control of Infectious Aerosols	6.5.3.8.2
Association of Home Appliance Manufacturers (AHAM) 1111 19th Street NW, Suite 402, Washington, DC 20036		
ANSI/AHAM HRF-1- 2016 2019	Energy and Internal Volume of Refrigerating Appliances	Table G3.10.1
ANSI/AHAM RAC-1-2020	Room Air Conditioners	Table 6.8.1-4

Reference		Section
ASTM International 100 Barr Harbor Dr., West Conshohocken, PA 19428-2959		
ASTM C90- 46 24A	Standard Specification for <u>Dry-Cast</u> Loadbearing Concrete Masonry Units	5.5.3.2, A3.1.1, A9.4.4
ASTM C177-19 e <u>EO1</u>	Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmittance Properties by Means of the Guarded-Hot-Plate Apparatus	A9.3.1
ASTM C272/C272M-18 <u>(2024)</u>	Standard Test Method for Water Absorption of Core Materials for Sandwich Constructions	5.8.1.7.3
ASTM C518-21	Standard Test Method for Steady-State Thermal Transmittance Properties by Means of the Heat Flow Meter Apparatus	Table 6.8.2, A9.3.1
ASTM C835-06 (2013) <u>e1 (2020)</u>	Standard Test Method for Total Hemispherical Emittance of Surfaces up to 1400°C	5.5.3.2.2
ASTM C1224 (2020)	Standard Specification for Reflective Insulation for Building Applications	A9.4.2, Table A9.4.2-2
ASTM C1363- 49 24	Standard Test Method for the Thermal Performance of Building <u>Materials and Envelope</u> Assemblies by Means of a Hot Box Apparatus	A3.3.3.2, A9.3.1, A9.3.2, A10.1
ASTM C1371-15	Standard Test Method for Determination of Emittance of Materials Near Room Temperature using Portable Emissometers.	5.5.3.2.2
ASTM C1549-16	Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer	5.5.3.2.2
ASTM D1003-21	Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics	5.5.4.2.3, 5.5.4.4.2
ASTM E283/E283M-19	Standard Test Method for Determining Rate of Air Leakage through Exterior Windows, <u>Skylights</u> , Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen	Table 5.8.3.1, 5.8.3.2
ASTM E408-13 (2019)	Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques	5.5.3.2.2
ASTM E3158- 48 24	Standard Test Method for Measuring the Air Leakage Rate of a Large or Multizone Building	5.4.3.1.4, 12.5.3, G3.2.1.4
ASTM E779-19	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization	5.4.3.1.4, 12.5.3
ASTM E972-96 (2021)	Standard Test Method for Solar Photometric Transmittance of Sheet Materials Using Sunlight	5.8.2.6
ASTM E1677- 49 23	Standard Specification for an Air <u>Barrier (AB)</u> Retarder (AR) Material or System for Low-Rise Framed Building Walls	Table 5.8.3.1
ASTM E1680-16 <u>(2022)</u>	Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems	Table 5.8.3.1
ASTM E1827- 41 (2017) <u>22</u>	Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door	5.4.3.1.4, 12.5.3, G3.2.1.4
ASTM E1980- 41 (2019) <u>24</u>	Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low Sloped Opaque Surfaces	5.4.3.1.4
ASTM E2178-21a	Standard Test Method for <u>Determining Air Leakage Rate and Calculation of Air Permeance</u> of Building Materials	Table 5.8.3.1
ASTM E2357- 48 24	Standard Test Method for Determining Air Leakage <u>Rate</u> of Air Barrier Assemblies	Table 5.8.3.1
ASTM F1361-17	Standard Test Method for Performance of Open Deep Fat Fryers	Table 11.5.2.7.2-1
ASTM F1484-18	Standard Test Method for Performance of Steam Cookers	Table 11.5.2.7.2-2
ASTM F1495-14a	Standard Specification for Combination Oven Electric or Gas Fired	Table 11.5.2.7.2-4
ASTM F1496-13	Standard Test Method for Performance of Convection Ovens	Table 11.5.2.7.2-4

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ASTM F1696-18	Standard Test Method for Energy Performance of Stationary-Rack, Door-Type Commercial Dishwashing Machines	Table 11.5.2.7.2-3
ASTM F1920-15	Standard Test Method for Performance of Rack Conveyor Commercial Dishwashing Machines	Table 11.5.2.7.2-3
ASTM F2093-18	Standard Test Method for Performance of Rack Ovens	Table 11.5.2.7.2-4
ASTM F2144-17	Standard Test Method for Performance of Large Open Vat Fryers	Table 11.5.2.7.2-1
ASTM F2861-17	Standard Test Method for Enhanced Performance of Combination Oven in Various Modes	Table 11.5.2.7.2-4
Attachments Energy Rating Council (AERC) 355 Lexington Ave 15th Floor New York, NY 10017		
AERC-1- 2024 2023	Procedures for Determining Energy Performance Properties of Fenestration Attachments	Table 12.5.1, Table G3.1
Cool Roof Rating Council (CRRC) 2435 N. Lombard St., Portland, OR 97217, United States		
ANSI/CRRC S100 (2024 2025)	Standard Test Methods for Determining Radiative Properties of Materials	5.5.3.1.4
CSA Group Toronto, ON, Canada, M9W 1R3 178 Rexdale Blvd., Etobicoke/Toronto, ON 5801 E. Pleasant Valley Rd., Independence, OH 44131 (U.S. Headquarters)		
CSA C439-2018 (R2022)	Laboratory Methods of Test for Rating the Performance of Heat/Energy-Recovery Ventilators	6.4.7
<u>ANSI Z21.47-2021/CSA 2.3-2021</u>	<u>Gas-Fired Central Furnaces</u>	<u>Table G3.5.5,</u> <u>Table 6.8.1-5</u>
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Cooling Technology Institute (CTI) 3845 Cypress Creek Parkway, Suite 420, Houston, TX 77068 <u>13231 Champion Forest Drive, Suite 230, Houston, TX 77069; P.O. Box 681807, Houston, TX 77268</u>		
CTI ATC-105 (4922)	Acceptance Test Code for Water Cooling Towers	Table 6.8.1-7
CTI ATC-105 Adiabatic (23)	Acceptance Test Code for Adiabatic Fluid Coolers	Table 6.8.1-7
CTI ATC-105DS (18)	Acceptance Test Code for Dry Fluid Coolers	Table 6.8.1-7
CTI ATC-105S (11)	Acceptance Test Code for Closed-Circuit Cooling Towers	Table 6.8.1-7
CTI ATC-106 (11)	Acceptance Test Code for Mechanical Draft Evaporative Vapor Condensers	Table 6.8.1-7
CTI STD-201 RS (21)	Performance Rating of Evaporative Heat Rejection Equipment	Table 6.8.1-7
Door and Access Systems Manufacturers Association (DASMA) 1300 Sumner Avenue, Cleveland, OH 44115-2851		
ANSI/DASMA 105-2020	Test Method for Thermal Transmittance and Air Infiltration of Garage Doors <u>and Rolling Doors</u>	5.8.3.2, Table 5.8.3.2
International Association of Plumbing and Mechanical Officials (IAPMO) 4755 E. Philadelphia Street, Ontario, CA 91761-2816		
IAPMO/ANSI WE Stand- 2047 2023	Water Efficiency and Sanitation Standard for the Built Environment	11.5.2.3.5
International Organization for Standardization (ISO) ISO Central Secretariat BIBC II Chemin de Blandonnet 8, CP 401, 1214, Vernier, Geneva, Switzerland		
ISO 9050 (2003)	Glass in Building—Determination of Light Transmittance, Solar Direct Transmittance, Total Solar Energy Transmittance, Ultraviolet Transmittance and Related Glazing Factors	5.5.3.2.2
ISO 10211 (2017)	Thermal bridges in building construction—Heat flows and surface temperatures—Detailed calculations	A10.1

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ANSI/AHRI/ASHRAE/ISO 13256-1:1998 (2021)	Water-Source Heat Pumps—Testing and Rating for Performance—Part 1: Water-to-Air and Brine-to-Air Heat Pumps	Table 6.8.1-15
ANSI/AHRI/ASHRAE/ISO 13256-2:1998 (2021)	Water-Source Heat Pumps—Testing and Rating for Performance—Part 2: Water-to-Water and Brine-to-Water Heat Pumps	Table 6.8.1-15
ISO 14683 (2017)	Thermal bridges in building construction—Linear thermal transmittance—Simplified methods and default values	A10.1
ISO 25745-2:2015	Energy Performance of Lifts, Escalators and Moving Walks—Part 2: Energy Calculation and Classification for Lifts (Elevators)	10.4.3.4, 10.9.3, 11.5.2.7.1
National Electrical Manufacturers Association (NEMA) 1300 N. 17th Street, Suite 900, Arlington, VA 22209		
ANSI/NEMA MG 1- 2024 2016, with 2021 Revisions	Motors and Generators	3.2
National Fenestration Rating Council (NFRC) 6305 Ivy Lane, Suite 140, Greenbelt, MD 20770-6323		
ANSI/NFRC 100- 2020 2023	Procedure for Determining Fenestration Product U-Factors	5.8.2.4
ANSI/NFRC 200- 2020 2023	Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence	5.5.4.6, 5.8.2.5, 5.8.2.6
ANSI/NFRC 203- 2020 2023	Procedure for Determining Visible Transmittance of Tubular Daylighting Devices	5.8.2.6
NFRC 300- 2020 2023	Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems	5.8.2.6
NFRC 301- 2020 2023	Standard Test Method for Emittance of Glazing Products	5.5.4.6
ANSI/NFRC 400- 2020 2023	Procedure for Determining Fenestration Product Air Leakage	Table 5.8.3.2, 5.8.3.2
National Fire Protection Association (NFPA) 1 Battery March Park, Quincy, MA 02269-9101; P.O. Box 9101		
NFPA 70- 2020 2023	National Electric Code	6.5.1, 8.4.3.1, 8.4.3.2
NFPA 96- 2021 2024	Ventilation Control and Fire Protection of Commercial Cooking Operations	G3.2.2.9
Telecommunications Industry Association (TIA) 1320 North Courthouse Road, Suite 200		
ANSI/TIA-942- REV BC, July 12, 2017 2024	Telecommunication Infrastructure Standard for Data Centers	6.5.1
UL, LLC 333 Pfingsten Rd., Northbrook, IL 60062		
UL 181A-2021	Closure Systems for Use with Rigid Air Ducts and Air Connectors	6.4.4.2.1
UL 181B-2021	Closure Systems for Use with Flexible Air Ducts and Air Connectors	6.4.4.2.1
UL 727- 2018 2024	UL Standard for Safety—Oil Fired Central Furnaces	Table 6.8.1-5
UL 731-2021	UL Standard for Safety—Oil-Fired Unit Heaters	Table 6.8.1-5
U.S. Department of Defense 3010 Defense Pentagon, Washington, DC 20301		
MIL-P-17639F (1996 2017)	Pumps, Centrifugal, Miscellaneous Service, Naval Shipboard Use	10.4.8
MIL-P-17840C (1986 2018)	Pumps, Centrifugal, Close-Coupled, Navy Standard (for Surface Ship Application)	10.4.8
MIL-P-17881D (1972)	Pumps, Centrifugal, Boiler Feed (Multi-Stage)	10.4.8
MIL-P-18472 (1989)	Pumps, Centrifugal, Condensate, Feed Booster, Waste Heat Boiler, and Distilling Plant	10.4.8
MIL-P-18682D	Pump, Centrifugal, Main Condenser Circulating, Naval Shipboard	10.4.8

Reference		Section
U.S. Department of Energy (DOE) 1000 Independence Avenue, SW, Washington, DC 20585		
10 CFR Part 430, <u>Subpart B</u> , App N	Uniform Test Method for Measuring the Energy Consumption of Furnaces <u>Other Than Boilers</u>	Table 6.8.1-5, Table 6.8.1-6, Table F-4
10 CFR Part 430, <u>Subpart B</u> , App U	Uniform Test Method for Measuring the Energy Consumption of Ceiling Fans	6.5.3.7, Table 6.8.1-21, Table F-6
10 CFR Part 430 Subpart B App U	Uniform Test Method for Measuring the Energy Consumption of Ceiling Fans	F-3
10 CFR Part 431.304	Uniform Test Method for the Measurement of Energy Consumption of Walk-In Coolers and Walk-In Freezers	
10 CFR 431 Subpart K, App A	Uniform Test Method for Measuring the Energy Consumption of Distribution Transformers	
10 CFR Part 431, Subpart B, App B	Uniform Test Method for Measuring Nominal Full Load <u>the</u> Efficiency of Electric Motors	
10 CFR Part 431, Subpart Y	Pumps: Definitions, Energy Conservation Standards, and Uniform Test Method of the Measurement of Energy Consumption of Pumps	
42 USC 6831, et seq., Public Law 102-486	Energy Policy Act of 1992, EPACT 2005, and EISA 2007	6.4.1.1
U.S. Security and Exchange Commission (SEC) 100 F Street, NE, Washington, DC 20549		
The Interagency Paper on Sound Practices to Strengthen the Resilience of the US Financial System	The Interagency Paper on Sound Practices to Strengthen the Resilience of the US Financial System, April 7, 2003	6.5.1

Modify Informative Appendix E references as shown (I-P and SI).

Reference		Section
[...]		
ASTM E2813- 18 <u>24</u>	Standard Practice for Building Enclosure Commissioning	5.9.1, H1
[...]		

Modify Table G3.1 to accommodate the normative reference update to ANSI/ASHRAE Standard 55.

Table G-3.1 Modeling Requirements for Calculating Proposed Building Performance and Baseline Building Performance

Proposed Building Performance (Column A)	Baseline Building Performance (Column B)
[...]	
4. Schedule	
Schedules capable of modeling hourly variations in occupancy, lighting power, miscellaneous <i>equipment</i> power, <i>thermostat set points</i>, and <i>HVAC system</i> operation shall be used. The schedules shall be typical of the proposed <i>building</i> type as determined by the designer and approved by the <i>rating authority</i>. Temperature and Humidity Schedules. Temperature and humidity control <i>set points</i> and schedules as well as <i>temperature control throttling range</i> shall be the same for <i>proposed design</i> and <i>baseline building design</i>. HVAC System Fan Schedules. Schedules for <i>HVAC system</i> fans that provide <i>outdoor air</i> for <i>ventilation</i> shall run continuously whenever <i>spaces</i> are occupied and shall be cycled ON and OFF to meet heating and cooling loads during unoccupied hours. Exceptions: - Where no heating and/or cooling <i>system</i> is to be installed, and a heating or cooling <i>system</i> is being simulated only to meet the requirements described in this table, heating and/or cooling <i>system</i> fans shall not be simulated as running continuously during occupied hours but shall be cycled ON and OFF to meet heating and cooling loads during all hours. <i>HVAC system</i> fans shall remain on during occupied and unoccupied hours in <i>spaces</i> that have health- and safety-mandated minimum <i>ventilation</i> requirements during unoccupied hours. <i>HVAC system</i> fans shall remain on during occupied and unoccupied hours in <i>systems</i> primarily serving <i>computer rooms</i>. - Dedicated <i>outdoor air</i> supply fans shall stay off during unoccupied hours.	Same as <i>proposed design</i>. Exceptions: <i>Set points</i> and schedules for <i>HVAC systems</i> that <i>automatically</i> provide occupant thermal comfort via means other than directly controlling the air dry-bulb and wet-bulb temperature may be allowed to differ, provided that equivalent levels of occupant thermal comfort are demonstrated via the methodology in ASHRAE Standard 55, Section 5.3.35.3.4, “Elevated Air Speed,” or Standard 55, Appendix B, “Computer Program for Calculation of PMV-PPD.” - When the proposed <i>building</i> design includes <i>HVAC systems</i> serving <i>dwelling units</i> or <i>sleeping units</i> that have controls meeting requirements of Section 11.5.2.2.4 “H04: Residential Space HVAC Control”: - The <i>baseline building design</i> shall be modeled using heating temperature setback of 5°F (3°C) higher than in the <i>proposed design</i> but not higher than the occupied temperature for a maximum of 9 hours per day. - The <i>baseline building design</i> shall be modeled using cooling temperature setback of 5°F (3°C) lower than the <i>proposed design</i> but not lower than the occupied temperature for not more than 9 hours per day. - Schedules may be allowed to differ between <i>proposed design</i> and <i>baseline building design</i> when necessary to model non-standard <i>efficiency</i> measures, provided that the revised schedules have been approved by the <i>rating authority</i>. Measures that may warrant use of different schedules include but are not limited to <i>automatic</i> lighting controls, <i>automatic</i> natural <i>ventilation</i> controls, <i>automatic demand control ventilation</i> controls, and <i>automatic</i> controls that reduce <i>service water-heating</i> loads. In no case shall schedules differ where the controls are <i>manual</i> (e.g., <i>manual</i> operation of light switches or <i>manual</i> operation of windows). <i>HVAC system</i> fan schedules may be allowed to differ when Section G3.2.1.2(a) applies. - For <i>Systems</i> 6 and 8, only the <i>terminal-unit</i> fan and <i>reheat</i> coil shall be energized to meet heating <i>set point</i> during unoccupied hours - Lighting schedules may be allowed to differ based on occupancy sensor reduction factor in Tables G3.7-1 and G3.7-2.
[...]	

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.

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Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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