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Project Title:	2022 Energy Code Update Rulemaking
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Document Title:	Documents Incorporated by Reference in the Proposed 2022 Energy Code
Description:	Proposed changes to the 2022 Energy Code include updates to industry test standards incorporated by reference.
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DOCUMENTS INCORPORATED BY REFERENCE

The existing Energy Code incorporates a number of industry test standards by reference. The amendments proposed for the 2022 Energy Code include updates to these standards as needed to maintain currency. The following test standards are therefore incorporated by reference as a part of the proposed 2022 update:

All documents are available for review at the CEC located at 1516 Ninth Street, Sacramento, California 95814.

Any document that is not copyrighted will be available on the CEC's building standards website found at <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>.

Publisher and publication number	Title	Existing reference	Proposed reference
AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE			
AHRI 210/240-2017(2017)	Performance Rating of Unitary Air Conditioning and Air-Source Heat Pump Equipment (2008 with Addendum 1)	2008	2017
ANSI/AHRI 340/360-2019	Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment	2015	2019
AHRI Standard 430 (I-P)-2020	Performance Rating of Central Station Air-handling Unit Supply Fans		2020
AHRI Standard 440 (I-P)-2019	Performance Rating of Fan-coil Units		2019
AHRI 550/590-2020	Performance Rating of Water-Chilling Packages and Heat Pump Water-heating Packages Using the Vapor Compression Cycle (2020)	2015	2020
AHRI 680-2017	Performance Rating of Residential Air Filter Equipment	2015	2017

AHRI Standard 920 (I-P)-2020	Performance Rating of DX-Dedicated Outdoor Air System Units		2020
AHRI Standard 1060 (I-P)-2018	Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment		2018
AHRI Standard 1360 (I-P)-2017	Performance Rating of Computer and Data Processing Room Air Conditioners		2017
AHAM HRH-2	Residential Kitchen Range Hood Performance Test Procedures		2020
AHAM RKRH-CPPG	Residential Kitchen Range Hood Certification Program Procedural Guide		2020
AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION CANADIAN STANDARDS ASSOCIATION WINDOW AND DOOR MANUFACTURERS ASSOCIATION			
AAMA/WDMA/CSA 101/I.S.2/A440-17	NAFS 2011 – North American Fenestration Standard/Specification for Windows, Doors, and Skylights	2011	2017
American Conference of Governmental Industrial Hygienists	Threshold Limit Values (TLVS) and Biological Exposure Indices (BEIS)	2018	2021
American National Standards Institute			
ANSI/AIHA/ASSPZ9.5-2012	Laboratory Ventilation		2012
ANSI C82.6-2015 (R2020)	Ballasts For High-Intensity Discharge Lamps – Methods Of Measurement		2020
ANSI/CTA-2045-A-2018	Modular Communications Interface for Energy Management		2018

ANSI Z21.10.3-2019	Gas Water Heaters, Volume 1, Storage Water Heaters with Input Ratings above 75,000 Btu/h Or Less	2017	2019
ANSI C82.6-15(R20)	Lamp Ballasts -Ballasts for High- Intensity Discharge Lamps— Methods of Measurement (2015)	2015	2020
ANSI/NEMA WD 6-2016	National Electrical Manufacturers Association Document titled, “Wiring Devices – Dimensional Specification”		2016
American Society of Civil Engineers			
ASCE 7-16	AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARD 7-16		2016
AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGENISTS			
ASHRAE 55-2019	Thermal Environment Conditions for Human Occupancy	2017	2019
ASHRAE 62.2-2019	Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings	2016	2019
ANSI/ASHRAE Standard 154-2016	Ventilation For Commercial Cooking Operations,		2016
ASHRAE Handbooks			
HVAC Applications-IP(2019)		2015	2019
HVAC Systems and Equipment- IP(2020)		2016	2020
AMERICAN SOCIETY OF MECHANICAL ENGINEERS			
ASME A112.18.1-2012/CSA B125.1- 2018	Plumbing Supply Fittings	2012	2018

ASME A17.1-2019	Safety Code for Elevators and Escalators	2016	2019
AMERICAN SOCIETY FOR TESTING AND MATERIALS / ASTM INTERNATIONAL			
ASTM C177-19	Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded Hot Plate Apparatus	2013	2019
ASTM C272-18	Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions	2016	2018
ASTM C836/C836M-18	Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course (2018)	2015	2018
ASTM C1167-17	Standard Specification for Clay Roof Tiles (2017)	2011	2017
ASTM C1583-20	Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)	2013	2020
ASTM D822-18	Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings	2013	2018
ASTM D1863-18	Standard Specification for Mineral Aggregate Used on Built-Up Roofs (2018)	2013	2018
ASTM D2202-19	Standard Test Method for Slump of Sealants		2019
ASTM D2370-18	Standard Test Method for Tensile Properties of Organic Coatings	2016	2018

ASTM D2824-18	Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings, Nonfibered, Asbestos Fibered, and Fibered without Asbestos	2013	2018
ASTM D3468-20	Standard Specification for Liquid-Applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Waterproofing	2013	2020
ASTM D4798/D4798M-21	Standard Test Method Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method) (2021)	2016	2021
ASTM D6083/D6083M-21	Standard Specification for Liquid-Applied Acrylic Coating Used in Roofing	2005	2021
ASTM E283 -19	Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen	2012	2019
ASTM E408-19	Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques	2013	2019
ASTM E972-21	Standard Test Method for Solar Photometric Transmittance of Sheet Materials Using Sunlight	2013	2021
ASTM E1980-19	Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces	2011	2019
ASTM E2178-21	Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials	2013	2021

ASTM E2357-18	Standard Test Method for Determining Air Leakage of Air Barrier Assemblies	2017	2018
ASTM E779-19	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization	2010	2019
ASTM E1677-19	Standard Specification for Air Barrier (AB) Material or Assemblies for Low-Rise Framed Building Walls	2011	2019
ASTM E1680-16	Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems		2016
COOLING TECHNOLOGY INSTITUTE			
CTI ATC-105-19	Acceptance Test Code for Water Cooling Towers	2000	2019
CTI STD-201-17	Standard for the Certification of Water Cooling Tower Thermal Performance	2015	2017
COOL ROOF RATING COUNCIL			
CRRC-1 Product Rating Program Manual (2021)		2018	2021
ILLUMINATING ENGINEERING SOCIETY			
IES LM-79-19	Approved Method: Optical and Electrical Measurements of Solid State Lighting Products (2019)	2008	2019
NATIONAL FENESTRATION RATING COUNCIL			
NFRC 100	Procedure for Determining Fenestration Product U-factors	2017	2020
NFRC 200	Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence	2017	2020

NFRC 202	Procedure for Determining Translucent Fenestration Product Visible Transmittance at Normal Incidence	2017	2020
NFRC 203	Procedure for Determining Visible Transmittance of Tubular Daylighting Devices	2017	2020
NFRC 400	Procedure for Determining Fenestration Product Air Leakage	2017	2020
NSF INTERNATIONAL (FORMERLY NATIONAL SANITATION FOUNDATION)			
NSF/ANSI 50-19	Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities	2016	2019
RESIDENTIAL ENERGY SERVICES NETWORK			
ANSI/RESNET/ICC 380-2019	Standard for Testing Airtightness of Building Enclosures, Dwelling Unit, and Sleeping Unit Enclosures, Airtightness of Heating and Cooling Air Distribution Systems; and Airflow of Mechanical Ventilation Systems	2016	2019
UNDERWRITERS LABORATORIES / UL			
UL 723	Standard for Test for Surface Burning Characteristics of Building Materials	2017	2018
UL 727	Standard for Oil-Fired Central Furnaces	2006	2018
UL 731	Standard for Oil-Fired Unit Heaters	2012	2018
UL 1598	Standard for Luminaires	2012	2018
UL 1741	Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources	2018	2020

UL 2108	Low Voltage Lighting Systems	2018	2019
UL 8750	Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products	2018	2021
UL 9540	Standard for Energy Storage Systems and Equipment	2016	2020