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CONTENTS

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Project Initiation Notification System (PINS)

Section 2.5.1 of the *ANSI Essential Requirements* (www.ansi.org/essentialrequirements) describes the Project Initiation Notification System (PINS) and includes requirements associated with a PINS Deliberation. Following is a list of PINS notices submitted for publication in this issue of ANSI Standards Action by ANSI-Accredited Standards Developers (ASDs). Please also review the section in Standards Action entitled "American National Standards Maintained Under Continuous Maintenance" for information about American National Standards (ANS) maintained under the continuous maintenance option, as a PINS to initiate a revision of such standards is not required. Use the following Public Document Library url to access PDF & EXCEL reports of approved & proposed ANS: List of Approved and Proposed ANS. Directly and materially interested parties wishing to receive more information or to submit comments are to contact the sponsoring ANSI-Accredited Standards Developer directly **within 30 calendar days** of the publication of this PINS announcement.

AAMI (Association for the Advancement of Medical Instrumentation)

Gigi Golriz <ggolriz@aami.org> | 901 North Glebe Road, Suite 300 | Arlington, VA 22203 www.aami.org

Revision

BSR/AAMI ST72-202x, Bacterial endotoxins - Test methods, routine monitoring, and alternatives to batch testing (revision of ANSI/AAMI ST72-2019)
Stakeholders: Manufacturers, regulators, test labs

Project Need: Provides the requirements and guidance for testing for bacterial endotoxins.

Interest Categories: General interest, industry, regulatory/government, user

This document specifies general criteria to be applied in the determination of bacterial endotoxins on or in health care products, components, or raw materials employing bacterial endotoxins test (BET) methods using alternative recombinant reagents.
NOTE: Although the scope of this standard is limited to health care products, it also includes requirements and provides testing guidance that might be applicable to other products, such as, biologics, tissue-based products, and combination products.

AISC (American Institute of Steel Construction)

Nathaniel Gonner <gonner@aisc.org> | 130 E. Randolph Street, Suite 2000 | Chicago, IL 60601-6204 www.aisc.org

Revision

BSR/AISC 342-202x, Seismic Provisions for Evaluation and Retrofit of Existing Structural Steel Buildings (revision of ANSI/AISC 342-2022)
Stakeholders: Structural engineers, steel fabricators, steel erectors, general contractors

Project Need: Revise and update existing standard to provide up-to-date design provisions for the seismic evaluation and retrofit of structural steel components in existing buildings.

Interest Categories: Industry, consultant, general interest

Seismic Provisions for Evaluation and Retrofit of Existing Structural Steel Buildings governs the seismic evaluation and retrofit of structural steel components of the seismic force-resisting system of existing buildings. The requirements of these Provisions apply to existing structural steel components of a building system, retrofitted steel components of a building system, and new structural steel components added to an existing building system.

APCO (Association of Public-Safety Communications Officials-International)

Rosa Smith <smithr@apcointl.org> | 351 N Williamson Blvd | Daytona Beach, FL 32114-1112 www.apcoIntl.org

Revision

BSR/APCO 2.106.2-202X, Public Safety Grade Site Hardening Requirements (revision and redesignation of ANSI/APCO 2.106.1-2019)
Stakeholders: Users, Producers, and those Generally Interested in Emergency Communications processes and equipment.

Project Need: This standard addresses the requirements for public safety grade site hardening of wireless communications sites and facilities. The establishment of this standard is intended to assist public safety communications wireless network builders in constructing hardened public safety wireless networks and systems.

Interest Categories: Users, Producers, and those Generally Interested in Emergency Communications processes and equipment.

This standard revision and redesignated of this effort documents public safety requirements regarding various characteristics to make mission critical communications wireless networks sufficiently robust to meet the service availability requirements for public safety. This revision specifically addresses hardening for wireless communications sites with both transmission and/or reception capabilities.

APCO (Association of Public-Safety Communications Officials-International)

Rosa Smith <smithr@apcointl.org> | 351 N Williamson Blvd | Daytona Beach, FL 32114-1112 www.apcoIntl.org

Revision

BSR/APCO 3.110.2-202X, Cybersecurity Training for Public Safety Communications Personnel (revision and redesignation of ANSI/APCO 3.110.1-2019)
Stakeholders: Users, producers, and those generally interested in emergency communications processes and equipment.

Project Need: Traditionally, 9-1-1 call centers have operated and existed as stand-alone networks whose closed-network architecture has helped insulate their information, systems and networks from electronic security threats. However, NG9-1-1 ECCs will be required to exist in a connected world; networked with local public safety departments; and tied to local, regional and federal agencies. so that all emergency-related information can be shared at multiple levels. While this connectivity provides significant and notable benefits in our ability to respond to emergencies, it leaves the agencies much more exposed to viruses, denial-of-service attacks, intrusions by malicious hackers, data loss, and system downtime. In addition to physical and network/system ...

Interest Categories: Users, producers, and those generally interested in emergency communications processes and equipment.

This standard will provide guidance and direction in developing cybersecurity training programs that will help deal with emerging threats to the public safety communications sector. Training of telecommunicators, supervisors, network administrators and multiple levels of management is critical to recognizing and mitigating numerous threats which include, but are not limited to viruses, trojans, denial-of-service attacks, and other intrusions by malicious actors. These attacks can result in data loss and system downtime. In order to maintain effective operation and delivery of public safety services,this standard will address multiple levels, and types, of personnel training as they relate to an overall cybersecurity strategy for the emergency communications sector.

CSA (CSA America Standards Inc.)

Thuy Ton <ansi.contact@csagroup.org> | 8501 East Pleasant Valley Road | Cleveland, OH 44131-5575 www.csagroup.org

New Standard

BSR/CSA C555-202x, Definitions and Minimum Requirements for Energy Behaviour Programs (new standard)
Stakeholders: Program designers; program implementers; utility companies; electricity distributors; government agencies across Canada and the US.

Project Need: Even though behavioural demand response programs are delivering on the utilities' and distributors' immediate needs, a framework for designing, delivering, and operating these programs is needed to ensure long-term performance and allow for their designers/implementors to have comparable requirements and information. Furthermore, a lot of ad-hoc work is being done, and this has led to a lack of a generally defined and approved upon definition of what energy behaviour is and what behavioural demand response (or more commonly demand response programs) are, and what they look to accomplish

Interest Categories: Users (program designers and program implementers such as utility companies); general interest (such as researchers); regulatory authorities (such as governments: both federal and provincial).

Energy behaviour programs is only one of the approaches to better managing the grid dips and peaks, and in order to maximize results, utilities will have to adopt a variety of various approaches at the same time (including but not limited to time-of-use, automated DR, battery storage, etc.). The standard is expected to support utilities and system operators working on behaviour programs through the definition, plan, delivery, and evaluation processes. Energy behaviour programs target behind the meter no-cost measures for energy management and most importantly peak management. The standard will start by providing a consensus-based definition of energy behaviour. It will focus on actionable behaviours that can be adopted immediately and include both shifting behaviours to other times of the day, as well as reducing energy use. Furthermore, it will provide guidance to designers to set up explicit energy behaviour programs by providing the minimum requirement parameters for these programs. These parameters could include requirements and guidance on the design, delivery, and evaluation of such programs. Programs following the set requirements will be better positioned to measure results, capture resulting energy savings, and demonstrate credibility.

ECIA (Electronic Components Industry Association)

Laura Donohoe <ldonohoe@ecianow.org> | 13873 Park Center Road, Suite 315 | Herndon, VA 20171 www.ecianow.org

Revision

BSR/EIA 364-27E-202x, Mechanical Shock (Specified Pulse) Test Procedure for Electrical Connectors (revision and redesignation of ANSI/EIA 364-27D-2023)
Stakeholders: Electronics, electrical, and telecommunications industries

Project Need: Revise and redesignate current American National Standard

Interest Categories: User, Producer, General Interest

This test procedure establishes a test method to assess the ability of electrical components to withstand specified severities of mechanical shock.

HL7 (Health Level Seven)

Lynn Laakso <lynn@hl7.org> | 455 E. Eisenhower Parkway, Suite 300 #025 | Ann Arbor, MI 48108 www.hl7.org

New Standard

BSR/HL7 CDS HOOKS R1-202x, HL7 Specification: CDS Hooks, Release 1 (new standard)
Stakeholders: Healthcare stakeholders: Clinical Decision Support Systems Vendors, EHR, PHR Vendors, Health Care IT Vendors, Healthcare Institutions, HIS Vendors

Project Need: Scalable, interoperable clinical decision support integrated with the electronic health record is needed for improving care quality and value.

Interest Categories: Government/University, Vendor, Consultant, Provider, General Interest, Pharmaceutical, Payor

The HL7 CDS Hooks Implementation Guide describes a “hook”-based pattern for invoking decision support from within a clinician’s workflow. The API supports: Synchronous, workflow-triggered CDS calls returning information and suggestions, as well as launching a user-facing SMART app when CDS requires additional interaction.

NIST/ITL (National Institute of Standards and Technology/Information Technology Laboratory)

Jennifer Stathakis <Jennifer.stathakis@nist.gov> | 100 Bureau Drive MS 8940 | Gaithersburg, MD 20899-8900 www.nist.gov

Revision

BSR/NIST-ITL 1-202x, Data Format for the Interchange of Fingerprint, Face & Other Biometric Information (revision of ANSI/NIST-ITL 1-2011 Update:2015)
Stakeholders: All consumers and proponents of the ANSI/NIST-ITL standard can influence the update to the document as a consensus standard.

Project Need: Revision to the standard is needed to include modernized data formats for multiple modalities, such as Contactless, DNA, and Voice/Speaker recognition.

Interest Categories: Vendors, Consultants, Researchers, Practitioners, ABIS System Owners, and those with a general interest.

The ANSI/NIST-ITL Standard is used to ensure interoperability between biometric systems, and consistency in file formats for biometric data exchange.

Call for Comment on Standards Proposals

American National Standards

This section solicits public comments on proposed draft new American National Standards, including the national adoption of ISO and IEC standards as American National Standards, and on proposals to revise, reaffirm or withdraw approval of existing American National Standards. A draft standard is listed in this section under the ANSI-accredited standards developer (ASD) that sponsors it and from whom a copy may be obtained. Comments in connection with a draft American National Standard must be submitted in writing to the ASD no later than the last day of the comment period specified herein. Such comments shall be specific to the section (s) of the standard under review and include sufficient detail so as to enable the reader to understand the commenter's position, concerns and suggested alternative language, if appropriate. Please note that the ANSI Executive Standards Council (ExSC) has determined that an ASD has the right to require that interested parties submit public review comments electronically, in accordance with the developer's procedures.

Ordering Instructions for "Call-for-Comment" Listings

1. Order from the organization indicated for the specific proposal.
2. Use the full identification in your order, including the BSR prefix; for example, Electric Fuses BSR/SAE J554.
3. Include remittance with all orders.
4. BSR proposals will not be available after the deadline of call for comment.

Comments should be addressed to the organization indicated, with a copy to the Board of Standards Review, American National Standards Institute, 25 West 43rd Street, New York, NY 10036. e-mail: psa@ansi.org
* Standard for consumer products

Comment Deadline: August 17, 2025

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum ci to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
This addendum updates the Building Performance Factors (BPFs) that are used for determining compliance with Appendix G to coordinate with changes that have been made to the prescriptive and mandatory requirements of the standard since the release of 90.1-2022.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum cz to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
This addendum adds an alternative reference to AMCA 208 in the fan efficiency requirements that currently reference test procedures from 10 CFR 431 that may be rescinded.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

Comment Deadline: August 17, 2025

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
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Addenda

BSR/ASHRAE/IES Addendum dc to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
The addendum updates the Heat-Pump Water Heater energy credit in Section 11.5.2.3.1 (Credit W02) in accordance with the latest U.S. Department of Energy test procedures for commercial equipment.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

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Addenda

BSR/ASHRAE/IES Addendum dd to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
Addendum dd is intended to be an editorial cleanup of Table 12.5.1, Part 15, which describes the on-site renewable energy requirements for the budget building design.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

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Addenda

BSR/ASHRAE/IES Addendum de to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
This addendum updates rules for modeling dehumidification in Appendix G baseline systems 3 through 8 and 11, 12, and 13 to remove language that was meant to be removed when the Appendix G stable baseline was introduced in 90.1-2016.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum dh to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
This addendum clarifies that the additional lighting power allowance for interior exit stairways is intended to be used where codes require a higher minimum illumination level.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

Comment Deadline: August 17, 2025

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum di to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
Addendum di clarifies language in Appendix A related to the location of insulation for foundation walls.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum dk to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
This addendum provides an option for Heat/Energy-Recovery Ventilators serving spaces other than non-transient dwelling units to use CAN/CSA C439 energy performance ratings to comply with the requirements of Section 6.5.6.1.2.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum dl to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
Addendum dl makes revisions that allow the use of gas-fired heat pumps to meet 90.1 prescriptive requirements and achieve the H02 energy credit for efficient space heating.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum dm to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
Addendum dm makes revisions that allow the use of gas-fired heat pump water heaters to meet 90.1 prescriptive requirements and achieve the W03 energy credit for efficient gas water heaters.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

Comment Deadline: August 17, 2025

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum dn to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
This addendum removes the temperature control requirement currently in effect for service water heating storage. The removal is intended to avoid any perceived conflict in meeting the requirements of 90.1 and existing water safety standards.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum do to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
This addendum provides a reference update for ASHRAE Standard 90.4 to ensure the latest data center requirements are recognized for the 90.1 alternate compliance path in 6.6.1.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

180 Technology Parkway, Peachtree Corners, GA 30092 | etoto@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/IES Addendum dp to ANSI/ASHRAE/IES Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IES Standard 90.1-2022)
Addendum dp, written in partnership with SSPC 300, refines the commissioning process requirements in Section 4.2.5.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

Comment Deadline: August 17, 2025

RESNET (Residential Energy Services Network, Inc.)

P.O. Box 4561, Oceanside, CA 92052 | rick.dixon@resnet.us, www.resnet.us.com

New Standard

BSR/RESNET/ICC 1580-202x, Standard for Calculating CO2e Emissions Based on Metered Data, for Operational Ratings (new standard)
This standard will provide a consistent methodology for using long run marginal emission rates by Cambium generation and emission assessment (GEA) region in the calculation of CO2e emissions. The provisions of this standard provide requirements on how to estimate CO2e emissions from measured data on electricity and fuel consumption of a facility or organization. It is intended for the purposes of complying with standards on disclosure of emissions and of reducing emissions year after year using an Energy Management System.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: RESNET using the online form for the draft at https://www.resnet.us/about/standards/standards-currently-out-for-public-comment/, under link “ANSI Standards & Amendments Out For Public Comment”

ULSE (UL Standards and Engagement)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | Vickie.T.Hinton@ul.org, https://ulse.org/

National Adoption

BSR/UL 62784-202x, Standard for Safety for Vacuum Cleaners and Dust Extractors Providing Equipment Protection Level DC for the Collection of Combustible Dusts - Particular Requirements (national adoption with modifications of IEC 62784)
Revisions to the proposal document dated November 22, 2024, per response to comments received.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: https://csds.ul.com/ProposalAvailable

ULSE (UL Standards and Engagement)

1603 Orrington Avenue, Suite 2000, Evanston, IL 60201 | mitchell.gold@ul.org, https://ulse.org/

Revision

BSR/UL 486D-202x, Standard for Sealed Wire Connector Systems (revision of ANSI/UL 486D-2023)
Ballot of the following proposed revisions: (1) Clarification of component requirements; and (2) Correction to Markings section.
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: Follow the instructions at the following website to enter comments into the CSDS Work Area: https://csds.ul.com/ProposalAvailable

ULSE (UL Standards and Engagement)

1603 Orrington Ave, Suite 2000, Evanston, IL 60201 | Lisette.delgado@ul.org, https://ulse.org/

Revision

BSR/UL 1008M-202x, Standard for Safety for Transfer Switch Equipment, Meter-Mounted (revision of ANSI/UL 1008M-2024)
To revise current American National Standard
Click here to view these changes in full
Send comments (copy psa@ansi.org) to: Follow the instructions in the following website to enter comments into the CSDS Work https://csds.ul.com/Home/ProposalsDefault.aspx"

Comment Deadline: September 1, 2025

AARST (American Association of Radon Scientists and Technologists)

527 N. Justice Street, Hendersonville, NC 28739 | StandardsAssist@gmail.com, www.aarst.org

Revision

BSR/AARST CC-1000-202x, Soil Gas Control Systems in New Construction of Multifamily, School, Commercial and Mixed-Use Buildings (revision of ANSI/AARST CC-1000-2023)
The provisions in this standard provide prescriptive minimum requirements for the construction of any building intended for human occupancy, except for 1- and 2-family dwellings, in order to reduce occupant exposure to radon and other hazardous soil gases.
Single copy price: $TBD
Obtain an electronic copy from: www.standards.aarst.org/public-review
Send comments (copy psa@ansi.org) to: standards@aarst.org

AISC (American Institute of Steel Construction)

130 E. Randolph Street, Suite 2000, Chicago, IL 60601-6204 | gonner@aisc.org, www.aisc.org

New Standard

BSR/AISC 313-202x, Code of Standard Practice for Structural Stainless Steel Buildings (new standard)
This Code sets forth criteria for the trade practices involved in the design, purchase, fabrication, and erection of structural stainless steel buildings and other structures, where other structures are defined as those structures designed, fabricated, and erected in a manner similar to buildings with building-like vertical and lateral load-resisting elements.
Single copy price: $35.00
Obtain an electronic copy from: www.aisc.org/publicreview
Send comments (copy psa@ansi.org) to: Nathaniel Gonner at gonner@aisc.org

ANS (American Nuclear Society)

1111 Pasquinelli Drive, Suite 350, Westmont, IL 60559 | kmurdoch@ans.org, www.ans.org

Reaffirmation

BSR/ANS 15.2-1999 (R202x), Quality Control for Plate-Type Uranium-Aluminum Fuel Elements (reaffirmation of ANSI/ANS 15.2-1999 (R2021))
This standard sets forth general requirements for the establishment and execution of a program designed to verify that the quality of plate-type uranium-aluminum fuel elements being purchased for research reactors conforms to the requirements of the contract and applicable technical documents, including specifications, standards, and drawings.
Single copy price: $64.00
Obtain an electronic copy from: orders@ans.org
Send comments (copy psa@ansi.org) to: standards@ans.org

Comment Deadline: September 1, 2025

APCO (Association of Public-Safety Communications Officials-International)

351 N Williamson Blvd, Daytona Beach, FL 32114-1112 | smithr@apcointl.org, www.apcoIntl.org

New Standard

BSR/APCO 2.108.1-202X, 700 MHz Public Safety Deployable Trunking Systems (new standard)
The scope of the proposed Standard is to identify the 700-MHz frequency pairs designated by the FCC for use in Deployable Trunked Systems and the FCC-imposed limitations on their use, identify RF Power levels to be used by Deployable Trunked Systems, identify the common WACN and System ID to be used in the programming of both the Deployable Network Equipment and Subscriber Units for use on these channels, identify the common Talk Group IDs and display names, and designated usage of the talk-groups in an Incident Command System compatible format, identify procedures for the use of Encryption on Talk Groups, and identify use of P25 Phase II (TDMA) equipment in Deployable Trunked Systems. This will provide both the operators of Deployable Trunked Systems and those who program end user subscriber equipment the information needed to successfully deploy interoperable communications capabilities to support incidents and pre-planned events requiring additional capabilities and resources.
Single copy price: Free
Obtain an electronic copy from: standards@apcointl.org
Send comments (copy psa@ansi.org) to: Same

API (American Petroleum Institute)

200 Massachusetts Avenue NW, Washington, DC 20001 | buflodj@api.org, www.api.org

National Adoption

BSR/API Manual of Petroleum Measurement Standards Chapter 17.10.1-202x, Refrigerated light hydrocarbon fluids - Measurement of cargoes on board LNG carriers (identical national adoption of ISO 10976:2023)
Establishes all of the steps needed to properly measure and account for the quantities of cargoes on liquefied natural gas (LNG) carriers. This includes, but is not limited to, the measurement of liquid volume, vapor volume, temperature and pressure, and accounting for the total quantity of the cargo on board. This document describes the use of common measurement systems used on board LNG carriers, the aim of which is to improve the general knowledge and processes in the measurement of LNG for all parties concerned. This document provides general requirements for those involved in the LNG trade on ships and onshore.
Single copy price: $Available free of charge.00
Obtain an electronic copy from: buflodj@api.org
Send comments (copy psa@ansi.org) to: John Buflod, buflodj@api.org

Comment Deadline: September 1, 2025

ASA (ASC S2) (Acoustical Society of America)

1305 Walt Whitman Road, Suite 300, Melville, NY 11747 | standards@acousticalsociety.org, www.acousticalsociety.org

Reaffirmation

BSR/ASA S2.34-1984 (R202x), Guide to the Experimental Determination of Rotational Mobility Properties and the Complete Mobility Matrix (reaffirmation of ANSI/ASA S2.34-1984 (R2020))
This Guide is the fourth part of a set of five documents covering the experimental determination of the mechanical mobility of structures by a variety of methods appropriate for different test situations. The present Part IV of the set offers guidance in situations where it is necessary to measure not only translational motion responses to a translational exciting force but also the rotational and combination terms of the 6x6 mobility matrix required to fully describe each point of a structure. This part of the set is published as an ANSI Guide rather than as a Standard because the state of the art of rotational motion and force measurement is still in flux. Several methods are described, all requiring attached exciters.
Single copy price: $110.00
Obtain an electronic copy from: standards@acousticalsociety.org
Send comments (copy psa@ansi.org) to: standards@acousticalsociety.org

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

180 Technology Parkway, Peachtree Corners, GA 30092 | mweber@ashrae.org, www.ashrae.org

Addenda

BSR/ASHRAE/ASHE Addendum 170y-202x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2021)
This proposed addendum follows up on action earlier this year when the committee addressed research from ASHRAE CO-RP-03. This research determined that the definitive value of 20 ACH for operating rooms was not scientifically justified, but could also not be rejected either. A group of clinicians, engineers, researchers, and facilities managers has since implemented a research task that focused on collecting operating test and balance data and compared those against published SSI rates for the corresponding hospital. The research team collected test and balance data from 45 hospitals that contain 521 operating rooms from three geographically diverse health systems with the key results determining that increased ventilation does not lead to reduced SSI and leads to a marginal increase in SSI rates. Accordingly, SSPC 170 reviewed the research and recommends that prior to performing operational adjustments to Operating Room space ventilation, a risk assessment should be completed and added a footnote to Tables 7-1 and 8-1.
Single copy price: Free
Obtain an electronic copy from: Free download at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts
Send comments (copy psa@ansi.org) to: Online Comment Database at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts

Comment Deadline: September 1, 2025

ASSP (ASC A10) (American Society of Safety Professionals)

520 N. Northwest Highway, Park Ridge, IL 60068 | TFisher@ASSP.org, www.assp.org

Revision

BSR/ASSP A10.4-202X, Safety Requirements for Personnel Hoists, Employee Elevators, Rope-Guided and Non-Guided Workers™ Hoists on Construction and Demolition Sites (revision and redesignation of ANSI/ASSE A10.4 -2016)
This standard applies to the design, construction, installation, operation, inspection, testing, maintenance, alterations, and repair of personnel hoists and employee elevators that (1) are not an integral part of buildings, (2) are installed inside or outside buildings, structures, or tower cranes during construction, alteration, or demolition operations and (3) are used to raise and lower workers and other personnel connected with or related to the structure. These personnel hoists and employee elevators may also be used for transporting materials under specific circumstances defined in this standard. The standard also establishes minimum safety requirements for rope-guided and non-guided workers' hoists used for the transportation of persons to and from working elevations during normal construction and demolition operations, including maintenance, and is restricted to use in special situations.
Single copy price: $125.00
Obtain an electronic copy from: Tim Fisher <tfisher@assp.org>
Send comments (copy psa@ansi.org) to: Same

ASSP (ASC A10) (American Society of Safety Professionals)

520 N. Northwest Highway, Park Ridge, IL 60068 | TFisher@ASSP.org, www.assp.org

Revision

BSR/ASSP A10.23-202x, Safety Requirements for the Installation of Drilled Shafts (revision of ANSI/ASSP A10.23 -2019)
This standard establishes safety requirements for the installation of drilled shafts during construction and demolition operations.
Single copy price: $125.00
Obtain an electronic copy from: Tim Fisher <tfisher@assp.org>
Send comments (copy psa@ansi.org) to: Same

AWS (American Welding Society)

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | bboddiger@aws.org, www.aws.org

New Standard

BSR/AWS B5.31-202x, Specification for the Qualification of B31 Owners Inspectors (new standard)
This standard describes the requirements for qualification as an Owner's Inspector as described in the ASME B31 Codes. The requirements include education, experience, and written examinations. This standard also covers the job functions a qualified Owner's Inspector should be able to perform.
Single copy price: $Member 30/Non-Member 40
Obtain an electronic copy from: bboddiger@aws.org
Send comments (copy psa@ansi.org) to: Brenda Boddiger <bboddiger@aws.org>

Comment Deadline: September 1, 2025

AWWA (American Water Works Association)

6666 W. Quincy Avenue, Denver, CO 80235 | mrohr@awwa.org, www.awwa.org

Revision

BSR/AWWA B100-202x, Granular Filter Material (revision of ANSI/AWWA B100-2015)
This standard describes gravel, high-density gravel, silica sand, high-density media, anthracite filter materials, and the placement of the materials in filters for water supply service application. ANSI/AWWA B604, Standard for Granular Activated Carbon, addresses use of GAC as a filter medium and as an adsorbent.
Single copy price: Free
Obtain an electronic copy from: ETSsupport@awwa.org
Send comments (copy psa@ansi.org) to: AWWA, Paul J. Olson (polson@awwa.org)

ICC (International Code Council)

4051 Flossmoor Road, Country Club Hills, IL 60478 | kaittaniemi@iccsafe.org, www.iccsafe.org

New Standard

BSR/ICC 1125-202x, Standard for Classification of Magnesium Oxide Boards in Building and Construction (new standard)
This standard establishes the minimum physical board requirements for several categories of MgO board usage in building and construction (i.e.. exterior sheathing, interior sheathing roofing, subflooring, roofing, tile backer, etc.) for reference in model building codes.
Single copy price: Free
Obtain an electronic copy from: https://www.iccsafe.org/products-and-services/i-codes/code-development/cs/mgob_consensus_committee/
Send comments (copy psa@ansi.org) to: https://form.jotform.com/Code_Apps/ICC-Public_Comments

ISA (International Society of Automation)

3252 S. Miami Blvd, Suite 102, Durham, NC 27703 | lfranke@isa.org, www.isa.org

Revision

BSR/ISA 75.05.01-202x, Control Valve Terminology (revision of ANSI/ISA 75.05.01-2019)
This document provides users with a glossary of definitions commonly used in the control valve industry.
Single copy price: $99.00
Obtain an electronic copy from: lfranke@isa.org
Send comments (copy psa@ansi.org) to: Lynne Franke <lfranke@isa.org>

NSF (NSF International)

789 N. Dixboro Road, Ann Arbor, MI 48105 | cleone@nsf.org, www.nsf.org

Revision

BSR/NSF/CAN 61-202x (i193r1), Drinking Water System Components - Health Effects (revision of ANSI/NSF/CAN 61-2024)
This standard is intended to cover specific materials or products that come into contact with: drinking water, drinking water treatment chemicals, or both. The focus of the standard is evaluation of contaminants or impurities imparted indirectly to drinking water.
Single copy price: Free
Obtain an electronic copy from: https://standards.nsf.org/higherlogic/ws/public/download/80026/61i193r1%20-%2061%20Reorg%20New%20Def%20-%20JC%20Memo%20%26%20ballot.pdf
Send comments (copy psa@ansi.org) to: cleone@nsf.org

Comment Deadline: September 1, 2025

PMI (Project Management Institute)

18 Campus Boulevard, Suite 150, Newtown Square, PA 19073 | lorna.scheel@pmi.org, www.pmi.org

New Standard

BSR/PMI 2X-007-202X, Standard for Artificial Intelligence in Portfolio, Program, and Project Management (new standard)
The standard for AI in portfolio, program, and project management establishes a framework to govern the development, deployment, and oversight of AI initiatives within an organization. This standard serves to ensure responsible and effective use of AI while promoting transparency, fairness, and accountability throughout the portfolio, program, and project lifecycle, ultimately contributing to organizational success and societal benefit.
Single copy price: Free
Obtain an electronic copy from: https://publiccomment.pmi.org/
Send comments (copy psa@ansi.org) to: standards.department@pmi.org

ULSE (UL Standards and Engagement)

12 Laboratory Dr, Research Triangle, NC 27709 | anastasia.letaw@ul.org, https://ulse.org/

Reaffirmation

BSR/UL 60079-7-2017 (R202x), Standard for Safety for Explosive Atmospheres - Part 7: Equipment Protection by Increased Safety e (reaffirm a national adoption ANSI/UL 60079-7-2017 (R2021))
(1) Reaffirmation and continuance of the Fifth Edition of the Standard for Safety for Explosive atmospheres – Part 7: Equipment protection by increased safety “e’’, UL 60079-7, as an standard.
Single copy price: Free..00
Obtain an electronic copy from: https://csds.ul.com/ProposalAvailable
Send comments (copy psa@ansi.org) to: https://csds.ul.com/ProposalAvailable

ULSE (UL Standards and Engagement)

12 Laboratory Dr, Research Triangle, NC 27709 | anastasia.letaw@ul.org, https://ulse.org/

Reaffirmation

BSR/UL 60947-7-1-2017 (R202x), Standard for Safety for Low-Voltage Switchgear and Controlgear - Part 7-1: Ancillary Equipment - Terminal Blocks for Copper Conductors (reaffirmation of ANSI/UL 60947-7-1-2017 (R2021))
(1) Reaffirmation and continuance of the Fourth Edition of the Standard for Safety for Low-voltage Switchgear and Controlgear - Part 7-1: Ancillary Equipment - Terminal Blocks for Copper Conductors, UL 60947-7-1, as an standard.
Single copy price: Free..00
Obtain an electronic copy from: https://csds.ul.com/ProposalAvailable
Send comments (copy psa@ansi.org) to: https://csds.ul.com/ProposalAvailable

Comment Deadline: September 1, 2025

ULSE (UL Standards and Engagement)

12 Laboratory Dr, Research Triangle, NC 27709 | anastasia.letaw@ul.org, https://ulse.org/

Reaffirmation

BSR/UL 60947-7-3-2017 (R202x), Standard for Safety for Low-Voltage Switchgear and Controlgear - Part 7-3: Ancillary Equipment - Safety Requirements for Fuse Terminal Blocks (reaffirmation of ANSI/UL 60947-7-3-2017 (R2021))
(1) Reaffirmation and continuance of the Third Edition of the Standard for Safety for Low-Voltage Switchgear and Controlgear – Part 7-3: Ancillary Equipment – Safety Requirements for Fuse Terminal Blocks, UL 60947-7-3, as an standard.
Single copy price: Free..00
Obtain an electronic copy from: https://csds.ul.com/ProposalAvailable
Send comments (copy psa@ansi.org) to: https://csds.ul.com/ProposalAvailable

ULSE (UL Standards and Engagement)

12 Laboratory Dr, Research Triangle, NC 27709 | anastasia.letaw@ul.org, https://ulse.org/

Reaffirmation

BSR/UL 80079-36-2021 (R202x), Standard for Safety for Explosive Atmospheres - Part 36: Non-Electrical Equipment for Explosive Atmospheres - Basic Method and Requirements (reaffirm a national adoption ANSI/UL 80079-36-2021)
(1) Reaffirmation and continuance of the First Edition of the Standard for Safety for Explosive Atmospheres – Part 36: Non-Electrical Equipment for Explosive Atmospheres – Basic Method and Requirements, UL 80079-36, as an standard.
Single copy price: Free..00
Obtain an electronic copy from: https://csds.ul.com/ProposalAvailable
Send comments (copy psa@ansi.org) to: https://csds.ul.com/ProposalAvailable

ULSE (UL Standards and Engagement)

12 Laboratory Dr, Research Triangle, NC 27709 | anastasia.letaw@ul.org, https://ulse.org/

Reaffirmation

BSR/UL 80079-37-2021 (R202x), Standard for Safety for Explosive Atmospheres - Part 37: Non-Electrical Equipment for Explosive Atmospheres - Non Electrical Type of Protection Constructional Safety c, Control of Ignition Source b, Liquid Immersion k (reaffirm a national adoption ANSI/UL 80079-37-2021)
(1) Reaffirmation and continuance of the First Edition of the Standard for Safety for Explosive Atmospheres – Part 37: Non-Electrical Equipment for Explosive Atmospheres – Non Electrical Type of Protection Constructional Safety “c”, Control of Ignition Source “b”, Liquid Immersion “k”, UL 80079-37, as an standard.
Single copy price: Free..00
Obtain an electronic copy from: https://csds.ul.com/ProposalAvailable
Send comments (copy psa@ansi.org) to: https://csds.ul.com/ProposalAvailable

ULSE (UL Standards and Engagement)

100 Queen Street, Suite 1040, Ottawa, Canada, ON | Jacob.Stewart@ul.org, https://ulse.org/

Revision

BSR/UL 1191-202x, Standard for Components for Personal Flotation Devices (revision of ANSI/UL 1191-2024)
Proposing to withdraw the previous proposal and revert to currently approved requirements.
Single copy price: Free..00
Obtain an electronic copy from: https://csds.ul.com/ProposalAvailable
Send comments (copy psa@ansi.org) to: https://csds.ul.com/ProposalAvailable

Comment Deadline: September 1, 2025

VITA (VMEbus International Trade Association (VITA))

929 W. Portobello Avenue, Mesa, AZ 85210 | jing.kwok@vita.com, www.vita.com

Revision

BSR/VITA 47.2-202x, Class 2 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (revision of ANSI/VITA 47.2-2019)
The VITA 47 group of standards defines Environments, Design and Construction, Safety, Quality Systems, and ESS (Environmental Stress Screening) requirements for commercial-off-the-shelf (COTS) Plug-In Modules intended for commercial, ground, naval, and aerospace applications. VITA 47.2 address requirements specific to dedicated service electronic products. This revision enables a broader use of this standard across the COTS supplier market with added flexibility in environmental class options. It also corrects typographical errors, adds additional requirements for conformance to improve interoperability and maintainability, and rugged design for tactical applications.
Single copy price: $100.00
Obtain an electronic copy from: admin@vita.com
Send comments (copy psa@ansi.org) to: admin@vita.com

VITA (VMEbus International Trade Association (VITA))

929 W. Portobello Avenue, Mesa, AZ 85210 | jing.kwok@vita.com, www.vita.com

Revision

BSR/VITA 47.3-202x, Class 3 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (revision of ANSI/VITA 47.3-2019)
The VITA 47 group of standards defines Environments, Design and Construction, Safety, Quality Systems, and ESS (Environmental Stress Screening) requirements for commercial-off-the-shelf (COTS) Plug-In Modules intended for commercial, ground, naval, and aerospace applications. VITA 47.3 address requirements specific to high-performance electronic products. This revision enables a broader use of this standard across the COTS supplier market with added flexibility in environmental class options. It also corrects typographical errors, adds additional requirements for conformance to improve interoperability and maintainability, and rugged design for tactical applications.
Single copy price: $100.00
Obtain an electronic copy from: admin@vita.com
Send comments (copy psa@ansi.org) to: admin@vita.com

VITA (VMEbus International Trade Association (VITA))

929 W. Portobello Avenue, Mesa, AZ 85210 | jing.kwok@vita.com, www.vita.com

Revision

BSR/VITA 67.3-202x, Coaxial Interconnect on VPX, Spring-Loaded Contact on Backplane (revision of ANSI/VITA 67.3-2023)
This document describes an open standard of configuration and interconnect with the structure of VITA 67.0 enabling an interface compatible with VITA 46 containing multi-position blind mate analog connectors with coaxial contacts, having fixed contacts on the Plug-In Module and spring action on the backplane. This revision adds SMPS Gen2 contact interfaces to support additional radial alignment.
Single copy price: $100.00
Obtain an electronic copy from: admin@vita.com
Send comments (copy psa@ansi.org) to: admin@vita.com

Comment Deadline: September 16, 2025

ASME (American Society of Mechanical Engineers)

Two Park Avenue, M/S 6-2B, New York, NY 10016-5990 | ansibox@asme.org, www.asme.org

Stabilized Maintenance

BSR/ASME B29.22-2001 (S202x), Drop Forged Rivetless Chains, Sprocket Teeth Drive Chain/Drive Dogs (stabilized maintenance of ANSI/ASME B29.22-2001 (R2021))
This Standard covers a type of chain made from drop-forged steel parts that are heat treated and are proportioned for high strength and comparative light weight. The simple design of this type of chain permits assembly or dismantling by hand. This chain is available in three regular types (Regular drop forged rivetless chain & X-type chain & Modified X-type rivetless chain) as illustrated and described. Numerous attachments are available to suit a wide variety of applications including trolley conveyor service.
Single copy price: $44.00
Order from: https://cstools.asme.org/csconnect/PublicReviewPage.cfm
Send comments (copy psa@ansi.org) to: Lydia Stanford

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 13888-3:2009 [R2020], Information security - Non-repudiation - Part 3: Mechanisms using asymmetric techniques (withdrawal of INCITS/ISO/IEC 13888-3:2009 [R2020])
Specifies mechanisms for the provision of specific, communication related, non-repudiation services using asymmetric cryptographic techniques.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 15444-1:2019 [2020], Information technology - JPEG 2000 image coding system - Part 1: Core coding system (withdrawal of INCITS/ISO/IEC 15444-1:2019 [2020])
Defines a set of lossless (bit-preserving) and lossy compression methods for coding bi-level, continuous-tone grey-scale, palletized colour, or continuous-tone colour digital still images.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

Comment Deadline: September 16, 2025

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 18014-2:2009 [R2020], Information technology - Security techniques - Time-stamping services - Part 2: Mechanisms producing independent tokens (withdrawal of INCITS/ISO/IEC 18014-2:2009 [R2020])
Presents a general framework for the provision of time-stamping services. Time-stamping services may generate, renew and verify time-stamp tokens. Time-stamp tokens are associations between data and points in time, and are created in a way that aims to provide evidence that the data existed at the associated date and time. In addition, the evidence may be used by non-repudiation services. This standard specifies mechanisms that generate independent time-stamps: in order to verify an independent time-stamp token, verifiers do not need access to any other time-stamp tokens. That is, timestamp tokens are not linked, as is the case for the token types defined in ISO/IEC 18014-3.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 29794-1:2016 [2020], Information technology - Biometric sample quality - Part 1: Framework (withdrawal of INCITS/ISO/IEC 29794-1:2016 [2020])
For any or all biometric sample types as necessary, establishes the following: terms and definitions that are useful in the specification and use of quality metrics; purpose and interpretation of biometric quality scores; encoding of quality data fields in biometric data interchange formats; methods for developing biometric sample datasets for the purpose of quality score normalisation; format for exchange of quality algorithm results; methods for aggregation of quality scores. The following are outside the scope of ISO/IEC 29794-1:2016: specification of minimum requirements for sample, module, or system quality scores; performance assessment of quality algorithms; standardization of quality algorithms.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 29794-4:2017 [2020], Information Technology - Biometric Sample Quality - Part 4: Finger Image Data (withdrawal of INCITS/ISO/IEC 29794-4:2017 [2020])
Establishes terms and definitions for quantifying finger image quality, methods used to quantify the quality of finger images, and standardized encoding of finger image quality, for finger images at 196,85 px/cm spatial sampling rate scanned or captured using optical sensors with capture dimension (width, height) of at least 1,27 cm x 1,651 cm.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

Comment Deadline: September 16, 2025

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 18092:2013 [R2020], Information technology - Telecommunications and information exchange between systems - Near Field Communication - Interface and Protocol (NFCIP-1) (withdrawal of INCITS/ISO/IEC 18092:2013 [R2020])
Defines communication modes for Near Field Communication Interface and Protocol (NFCIP 1) using inductive coupled devices operating at the centre frequency of 13,56 MHz for interconnection of computer peripherals. It also defines both the Active and the Passive communication modes of Near Field Communication Interface and Protocol (NFCIP-1) to realize a communication network using Near Field Communication devices for networked products and also for consumer equipment. Specifies, in particular, modulation schemes, codings, transfer speeds, and frame format of the RF interface, as well as initialization schemes and conditions required for data collision control during initialization. Defines a transport protocol including protocol activation and data exchange methods.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 21481:2012 [R2020], Information technology - Telecommunications and information exchange between systems - Near Field Communication Interface and Protocol -2 (NFCIP-2) (withdrawal of INCITS/ISO/IEC 21481:2012 [R2020])
ISO/IEC 18092, ISO/IEC 14443, and ISO/IEC 15693 specify the radio frequency signal interface, initialization, anti-collision and protocols for wireless interconnection of closely coupled devices and access to contactless integrated circuit cards operating at 13.56 MHz. This Standard specifies the communication mode selection mechanism, designed not to disturb any ongoing communication at 13.56 MHz, for devices implementing ISO/IEC 18092, ISO/IEC 14443, or ISO/IEC 15693. This Standard requires implementations to enter the selected communication mode as specified in the respective Standard. The communication mode specifications, however, are outside the scope of this Standard.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 23917:2005 [R2020], Information technology - Telecommunications and information exchange between systems - NFCIP-1 - Protocol Test Methods (withdrawal of INCITS/ISO/IEC 23917:2005 [R2020])
Specifies protocol test methods for ISO/IEC 18092 in addition to those specified in ISO/IEC 22536.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

Comment Deadline: September 16, 2025

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

Withdrawal

INCITS/ISO/IEC 27019:2017 [2020], Information technology - Security techniques - Information security controls for the energy utility industry (withdrawal of INCITS/ISO/IEC 27019:2017 [2020])
Provides guidance based on ISO/IEC 27002:2013 applied to process control systems used by the energy utility industry for controlling and monitoring the production or generation, transmission, storage and distribution of electric power, gas, oil, and heat, and for the control of associated supporting processes.
Single copy price: $50.40
Obtain an electronic copy from: http://webstore.ansi.org/
Order from: http://webstore.ansi.org/
Send comments (copy psa@ansi.org) to: incits@itic.org

Project Withdrawn

In accordance with clause 4.2.1.3.3 Discontinuance of a standards project of the ANSI Essential Requirements, an accredited standards developer may abandon the processing of a proposed new or revised American National Standard or portion thereof if it has followed its accredited procedures. The following projects have been withdrawn accordingly:

NCSLI (ASC Z540) (National Conference of Standards Laboratories)

5766 Central Avenue, Suite 150, Boulder, CO 80301 | jon_harben@keysight.com, www.ncsli.org

BSR/NCSL/ISO/IEC Guide 98-202x, Guide to the expression of uncertainty in measurement (GUM) (identical national adoption of ISO/IEC Guide 98)
Send comments (copy psa@ansi.org) to: Craig Gulka; cgulka@ncsli.org

ULSE (UL Standards and Engagement)

12 Laboratory Drive, Research Triangle Park, NC 27709-3995 | marina.currie@ul.org, https://ulse.org/

BSR/UL 60065 (R202x), Standard for Safety for Audio, Video and Similar Electronic Apparatus - Safety Requirements (reaffirmation of ANSI/UL 2021-2021)
Send comments (copy psa@ansi.org) to: Marina Currie <marina.currie@ul.org>

Notice of Withdrawal: ANS at least 10 years past approval date

The following American National Standards have not been revised or reaffirmed within ten years from the date of their approval as American National Standards and accordingly are withdrawn:

ASTM (ASTM International)

100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 | accreditation@astm.org, www.astm.org

ANSI/ASSE Z88.2-2015, Practices for Respiratory Protection (new standard)
Send comments (copy psa@ansi.org) to: Lauren Daly <accreditation@astm.org>

Withdrawal of an ANS by ANSI-Accredited Standards Developer

In accordance with clause 4.2.1.3.2 Withdrawal by ANSI-Accredited Standards Developer of the ANSI Essential Requirements, the following American National Standards have been withdrawn as an ANS.

ULSE (UL Standards and Engagement)

12 Laboratory Drive, Durham, NC 27709-3995 | patricia.a.sena@ul.org, https://ulse.org/

ANSI/UL 60065-2015a (R2020), UL Standard for Safety for Audio, Video and Similar Electronic Apparatus - Safety Requirements (reaffirmation of ANSI/UL 60065-2015a)
Send comments (copy psa@ansi.org) to: Questions may be directed to: Patricia Sena <patricia.a.sena@ul.org>

ULSE (UL Standards and Engagement)

12 Laboratory Drive, Durham, NC 27709-3995 | patricia.a.sena@ul.org, https://ulse.org/

ANSI/UL 60950-1-2014 (R2019), Standard for Safety for Information Technology Equipment - Safety - Part 1: General Requirements (reaffirmation of ANSI/UL 60950-1-2014)
Send comments (copy psa@ansi.org) to: Questions may be directed to: Patricia Sena <patricia.a.sena@ul.org>

ULSE (UL Standards and Engagement)

12 Laboratory Drive, Durham, NC 27709-3995 | patricia.a.sena@ul.org, https://ulse.org/

ANSI/UL 60950-21-2007 (R2022), Standard for Safety for Information Technology Equipment - Safety - Part 21: Remote Power Feeding (reaffirmation of ANSI/UL 60950-21-2007 (R2016))
Send comments (copy psa@ansi.org) to: Questions may be directed to: Patricia Sena <patricia.a.sena@ul.org>

ULSE (UL Standards and Engagement)

12 Laboratory Drive, Durham, NC 27709-3995 | patricia.a.sena@ul.org, https://ulse.org/

ANSI/UL 60950-22-2017 (R2022), Standard for Safety for Information Technology Equipment - Safety - Part 22: Equipment to be Installed Outdoors (reaffirmation of ANSI/UL 60950-22-2017)
Send comments (copy psa@ansi.org) to: Questions may be directed to: Patricia Sena <patricia.a.sena@ul.org>

ULSE (UL Standards and Engagement)

12 Laboratory Drive, Durham, NC 27709-3995 | patricia.a.sena@ul.org, https://ulse.org/

ANSI/UL 60950-23-2016 (R2022), Standard for Safety for Information Technology Equipment - Safety - Part 23: Large Data Storage Equipment (reaffirmation of ANSI/UL 60950-23-2007 (R2016))
Send comments (copy psa@ansi.org) to: Questions may be directed to: Patricia Sena <patricia.a.sena@ul.org>

Final Actions on American National Standards

The standards actions listed below have been approved by the ANSI Board of Standards Review (BSR) or by an ANSI-Audited Designator, as applicable.

ABMA (ASC B3) (American Bearing Manufacturers Association)

1001 N. Fairfax Street, Suite 500, Alexandria, VA 22314 | olson@americanbearings.org, www.americanbearings.org

ANSI/ABMA/ISO 5593-2025, Rolling bearings - Vocabulary (identical national adoption of ISO 5593:2023 and revision of ANSI/ABMA/ISO 5593-1997 (S2013)) Final Action Date: 7/8/2025 | *National Adoption*

ANSI/ABMA/ISO 10285/Amd 1-2025, Rolling bearings - Sleeve type linear ball bearings - Boundary dimensions and tolerances - Amendment 1 (identical national adoption of ISO 10285:2007/Amd 1:2012) Final Action Date: 7/8/2025 | *National Adoption*

ABYC (American Boat and Yacht Council)

613 Third Street, Suite 10, Annapolis, MD 21403 | eparks@abycinc.org, www.abycinc.org

ANSI/ABYC A-24-2025, Installation of Carbon Monoxide Detectors and Alarms (revision of ANSI/ABYC A-24-2020) Final Action Date: 7/8/2025 | *Revision*

ANSI/ABYC E-11-2025, AC and DC Electrical Systems on Boats (revision of ANSI/ABYC E-11-2023) Final Action Date: 7/7/2025 | *Revision*

ANSI/ABYC P-1-2025, Installation of Exhaust Systems for Propulsion of Auxiliary Engines (revision of ANSI/ABYC P-1 -2019) Final Action Date: 7/9/2025 | *Revision*

ASA (ASC S2) (Acoustical Society of America)

1305 Walt Whitman Road, Suite 300, Melville, NY 11747 | standards@acousticalsociety.org, www.acousticalsociety.org

ANSI/ASA S2.27-2002 (R2025), Standard Guidelines for the Measurement and Evaluation of Vibration of Ship Propulsion Machinery (reaffirmation of ANSI/ASA S2.27-2002 (R2020)) Final Action Date: 7/8/2025 | *Reaffirmation*

ANSI/ASA S2.31-1979 (R2025), Standard Methods for the Experimental Determination of Mechanical Mobility - Part 1: Basic Definitions and Transducers (reaffirmation of ANSI/ASA S2.31-1979 (R2020)) Final Action Date: 7/8/2025 | *Reaffirmation*

ANSI/ASA S2.32-1982 (R2025), Standard Methods for the Experimental Determination of Mechanical Mobility - Part 2: Measurements Using Single-Point Translational Excitation (reaffirmation of ANSI/ASA S2.32-1982 (R2020)) Final Action Date: 7/8/2025 | *Reaffirmation*

ANSI/ASA S2.75-2017/Part 1 (R2025), Shaft Alignment Methodology, Part 1: General Principles, Methods, Practices, and Tolerances (reaffirmation of ANSI/ASA S2.75-2017/Part 1 (R2020)) Final Action Date: 7/8/2025 | *Reaffirmation*

ASC X9 (Accredited Standards Committee X9, Incorporated)

275 West Street, Suite 107, Annapolis, MD 21401 | ambria.frazier@x9.org, www.x9.org

ANSI X9.100-111-2025, Check Endorsement (revision of ANSI X9.100-111-2018) Final Action Date: 7/11/2025 | *Revision*

AWS (American Welding Society)

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | jrosario@aws.org, www.aws.org

ANSI/AWS C2.20/C2.20M (R2025), Specification for Thermal Spraying Zinc Anodes on Steel Reinforced Concrete (reaffirmation of ANSI/AWS C2.20/C2.20M-2016) Final Action Date: 7/14/2025 | *Reaffirmation*

AWS (American Welding Society)

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | kbulger@aws.org, www.aws.org

ANSI/AWS A5.2/A5.2M-2025, Specification for Carbon and Low Alloy Steel Rods for Oxyfuel Gas Welding (revision of ANSI/AWS A5.2/A5.2M-2018) Final Action Date: 7/8/2025 | *Revision*

ANSI/AWS C1.4M/C1.4-2025, Specification for Resistance Welding of Carbon and Low-Alloys Steels (revision of ANSI/AWS C1.4M/C1.4-2017) Final Action Date: 7/14/2025 | *Revision*

BHMA (Builders Hardware Manufacturers Association)

529 14th Street NW, Suite 1280, Washington, DC 20045 | agambrall@kellencompany.com, www.buildershardware.com

ANSI/BHMA A156.45-2025, Standard for Determination of Builders Hardware Energy Consumption (new standard) Final Action Date: 7/7/2025 | *New Standard*

IEEE (Institute of Electrical and Electronics Engineers)

445 Hoes Lane, Piscataway, NJ 08854-4141 | s.merten@ieee.org, www.ieee.org

ANSI/IEEE 2824-2025, Guide for the Mechanical Acoustic Imaging Testing of High-Voltage Reactors (new standard) Final Action Date: 7/14/2025 | *New Standard*

ANSI/IEEE 2833-2025, Guide for Overhead Transmission Lines with Composite Insulated Crossarm Supports (new standard) Final Action Date: 7/14/2025 | *New Standard*

IIAR (International Institute of All-Natural Refrigeration)

1001 North Fairfax Street, Alexandria, VA 22314 | tony_lundell@iiar.org, www.iiar.org

ANSI/IIAR 6-2025, Standard for Inspection, Testing, and Maintenance of Closed-Circuit Ammonia Refrigeration Systems (revision of ANSI/IIAR 6-2019) Final Action Date: 7/7/2025 | *Revision*

ANSI/IIAR 7-2025, Operating Procedures for Closed-Circuit Ammonia Refrigeration Systems (revision of ANSI/IIAR 7 -2019) Final Action Date: 7/7/2025 | *Revision*

ITSDF (Industrial Truck Standards Development Foundation, Inc.)

1750 K Street NW, Suite 460, Washington, DC 20006 | chris.merther@itsdf.org, www.indtrk.org

ANSI/ITSDF B56.11.7-2020 (R2025), Liquefied Petroleum Gas (LPG) Fuel Cylinders (Horizontal or Vertical) Mounting - Liquid Withdrawal - for Powered Industrial Trucks (reaffirmation of ANSI/ITSDF B56.11.7-2020) Final Action Date: 7/8/2025 | *Reaffirmation*

NEMA (ASC C8) (National Electrical Manufacturers Association)

1300 North 17th Street, Suite 900, Arlington, VA 22209 | Khaled.Masri@nema.org, www.nema.org

ANSI ICEA T-27-581/NEMA WC 23053-2025, Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test (revision and redesignation of ANSI/NEMA WC 53/ICEA T-27-581-2020) Final Action Date: 7/14/2025 | *Revision*

NEMA (ASC C82) (National Electrical Manufacturers Association)

1812 N Moore Street, Arlington, VA 22209 | Connor.Grubbs@nema.org, www.nema.org

ANSI C82.13-2020 (R2025), Standard for Lamp Ballasts - Definitions for Fluorescent Lamps and Ballasts (reaffirmation of ANSI C82.13-2020) Final Action Date: 7/8/2025 | *Reaffirmation*

ANSI C82.6-2015 (S2025), Standard for Lamp Ballasts - Ballasts for High-Intensity Discharge Lamps - Methods of Measurement (stabilized maintenance of ANSI C82.6-2015 (R2020)) Final Action Date: 7/8/2025 | *Stabilized Maintenance*

NSF (NSF International)

789 N. Dixboro Road, Ann Arbor, MI 48105-9723 | arose@nsf.org, www.nsf.org

ANSI/NSF 2-2025 (i52r1), Food Equipment (revision of ANSI/NSF 2-2022) Final Action Date: 7/2/2025 | *Revision*

TAPPI (Technical Association of the Pulp and Paper Industry)

15 Technology Parkway, Suite 115, Peachtree Corners, GA 30092 | standards@tappi.org, www.tappi.org

ANSI/TAPPI T 1500 gl-2025, Optical measurements terminology (related to appearance evaluation of paper) (revision of ANSI/TAPPI T 1500 gl-2018) Final Action Date: 7/8/2025 | *Revision*

ULSE (UL Standards and Engagement)

1603 Orrington Ave, Evanston, IL 60201 | erin.webber@ul.org, https://ulse.org/

ANSI/UL 464A-2016 (R2025), Standard for Audible Signal Appliances for General Signaling Use (reaffirmation of ANSI/UL 464A-2016 (R2021)) Final Action Date: 7/9/2025 | *Reaffirmation*

ANSI/UL 696-2010 (R2025), Standard for Electric Toys (reaffirmation of ANSI/UL 696-2010 (R2020)) Final Action Date: 7/8/2025 | *Reaffirmation*

ANSI/UL 1480A-2016 (R2025), Standard for Speakers for Commercial and Professional Use (reaffirmation of ANSI/UL 1480A-2016 (R2021)) Final Action Date: 7/9/2025 | *Reaffirmation*

ANSI/UL 1123-2025, UL Standard for Safety for Marine Buoyant Devices (revision of ANSI/UL 1123-2024) Final Action Date: 7/9/2025 | *Revision*

Call for Members (ANS Consensus Bodies)

Directly and materially interested parties who wish to participate as a member of an ANS consensus body for the standards listed are requested to contact the sponsoring developer directly in a timely manner.

ANSI Accredited Standards Developer

INCITS Executive Board – ANSI Accredited SDO and US TAG to ISO/IEC JTC 1, Information Technology

The InterNational Committee for Information Technology Standards (INCITS), an ANSI accredited SDO, is the forum of choice for information technology developers, producers and users for the creation and maintenance of formal de jure IT standards. INCITS' mission is to promote the effective use of Information and Communication Technology through standardization in a way that balances the interests of all stakeholders and increases the global competitiveness of the member organizations.

The INCITS Executive Board serves as the consensus body with oversight of its 40+ Technical Committees. Additionally, the INCITS Executive Board has the international leadership role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

Membership in the INCITS Executive Board is open to all directly and materially interested parties in accordance with INCITS membership rules. To find out more about participating on the INCITS Executive Board, contact Jennifer Garner at jgarner@itic.org or visit http://www.incits.org/participation/membership-info for more information.
Membership in all interest categories is always welcome; however, the INCITS Executive Board seeks to broaden its membership base in the following underrepresented categories:

- Producer-Software
- Producer-Hardware
- Distributor
- Service Provider
- Users
- Consultants
- Government
- SDO and Consortia Groups
- Academia
- General Interest

ANSI Accredited Standards Developer

SCTE (Society of Cable Telecommunications Engineers)

SCTE, an ANSI-accredited SDO, is the primary organization for the creation and maintenance of standards for the cable telecommunications industry. SCTE's standards mission is to develop standards that meet the needs of cable system operators, content providers, network and customer premises equipment manufacturers, and all others who have an interest in the industry through a fair, balanced and transparent process.
SCTE is currently seeking to broaden the membership base of its ANS consensus bodies and is interested in new members in all membership categories to participate in new work in fiber-optic networks, advanced advertising, 3D television, and other important topics. Of particular interest is membership from the content (program and advertising) provider and user communities.
Membership in the SCTE Standards Program is open to all directly and materially affected parties as defined in SCTE's membership rules and operating procedures.
More information is available at www.scte.org or by e-mail from standards@scte.org.

ANSI Accredited Standards Developer

ULSE - UL Standards and Engagement

Technical Committee 8400

This Technical Committee oversees the Standard for Safety for Virtual Reality, Augmented Reality And Mixed Reality Technology Equipment, UL 8400.

UL Standards & Engagement's goal is to have no interest category comprise more than one-third of the TC membership balance. To improve the current balance for TC 8400, UL Standards & Engagement is looking for participants in the following interest categories: AHJ, Commercial/Industrial User, Consumer, General, Government, and Supply Chain, and Testing and Standards Organizations.

For inquiries please contact: Sean McAlister, UL Standards & Engagement (ULSE) | 12 Laboratory Drive, RTP, NC 27713 E: Sean.McAlister@ul.org T: +1 984-317-5841

AAMI (Association for the Advancement of Medical Instrumentation)

901 North Glebe Road, Suite 300, Arlington, VA 22203 | ggolriz@aami.org, www.aami.org

BSR/AAMI ST72-202x, Bacterial endotoxins - Test methods, routine monitoring, and alternatives to batch testing (revision of ANSI/AAMI ST72-2019)

AARST (American Association of Radon Scientists and Technologists)

527 N. Justice Street, Hendersonville, NC 28739 | StandardsAssist@gmail.com, www.aarst.org

BSR/AARST CC-1000-202x, Soil Gas Control Systems in New Construction of Multifamily, School, Commercial and Mixed-Use Buildings (revision of ANSI/AARST CC-1000-2023)

AISC (American Institute of Steel Construction)

130 E. Randolph Street, Suite 2000, Chicago, IL 60601-6204 | gonner@aisc.org, www.aisc.org

BSR/AISC 313-202x, Code of Standard Practice for Structural Stainless Steel Buildings (new standard)

APCO (Association of Public-Safety Communications Officials-International)

351 N Williamson Blvd, Daytona Beach, FL 32114-1112 | smithr@apcointl.org, www.apcoIntl.org

BSR/APCO 2.106.2-202X, Public Safety Grade Site Hardening Requirements (revision and redesignation of ANSI/APCO 2.106.1-2019)

APCO (Association of Public-Safety Communications Officials-International)

351 N Williamson Blvd, Daytona Beach, FL 32114-1112 | smithr@apcointl.org, www.apcoIntl.org

BSR/APCO 3.110.2-202X, Cybersecurity Training for Public Safety Communications Personnel (revision and redesignation of ANSI/APCO 3.110.1-2019)

ASA (ASC S2) (Acoustical Society of America)

1305 Walt Whitman Road, Suite 300, Melville, NY 11747 | standards@acousticalsociety.org, www.acousticalsociety.org

BSR/ASA S2.34-1984 (R202x), Guide to the Experimental Determination of Rotational Mobility Properties and the Complete Mobility Matrix (reaffirmation of ANSI/ASA S2.34-1984 (R2020))

ASSP (ASC A10) (American Society of Safety Professionals)

520 N. Northwest Highway, Park Ridge, IL 60068 | TFisher@ASSP.org, www.assp.org

BSR/ASSP A10.23-202x, Safety Requirements for the Installation of Drilled Shafts (revision of ANSI/ASSP A10.23 -2019)

AWS (American Welding Society)

8669 NW 36th Street, Suite 130, Miami, FL 33166-6672 | bboddiger@aws.org, www.aws.org

BSR/AWS B5.31-202x, Specification for the Qualification of B31 Owners Inspectors (new standard)

ECIA (Electronic Components Industry Association)

13873 Park Center Road, Suite 315, Herndon, VA 20171 | ldonohoe@ecianow.org, www.ecianow.org

BSR/EIA 364-27E-202x, Mechanical Shock (Specified Pulse) Test Procedure for Electrical Connectors (revision and redesignation of ANSI/EIA 364-27D-2023)

ISA (International Society of Automation)

3252 S. Miami Blvd, Suite 102, Durham, NC 27703 | lfranke@isa.org, www.isa.org

BSR/ISA 75.05.01-202x, Control Valve Terminology (revision of ANSI/ISA 75.05.01-2019)

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 13888-3:2009 [R2020], Information security - Non-repudiation - Part 3: Mechanisms using asymmetric techniques (withdrawal of INCITS/ISO/IEC 13888-3:2009 [R2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 15444-1:2019 [2020], Information technology - JPEG 2000 image coding system - Part 1: Core coding system (withdrawal of INCITS/ISO/IEC 15444-1:2019 [2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 18014-2:2009 [R2020], Information technology - Security techniques - Time-stamping services - Part 2: Mechanisms producing independent tokens (withdrawal of INCITS/ISO/IEC 18014-2:2009 [R2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 29794-1:2016 [2020], Information technology - Biometric sample quality - Part 1: Framework (withdrawal of INCITS/ISO/IEC 29794-1:2016 [2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 29794-4:2017 [2020], Information Technology - Biometric Sample Quality - Part 4: Finger Image Data (withdrawal of INCITS/ISO/IEC 29794-4:2017 [2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 18092:2013 [R2020], Information technology - Telecommunications and information exchange between systems - Near Field Communication - Interface and Protocol (NFCIP-1) (withdrawal of INCITS/ISO/IEC 18092:2013 [R2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 21481:2012 [R2020], Information technology - Telecommunications and information exchange between systems - Near Field Communication Interface and Protocol -2 (NFCIP-2) (withdrawal of INCITS/ISO/IEC 21481:2012 [R2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 23917:2005 [R2020], Information technology - Telecommunications and information exchange between systems - NFCIP-1 - Protocol Test Methods (withdrawal of INCITS/ISO/IEC 23917:2005 [R2020])

ITI (INCITS) (InterNational Committee for Information Technology Standards)

700 K Street NW, Suite 600, Washington, DC 20001 | INCITS-comments@connectedcommunity.org, www.incits.org

INCITS/ISO/IEC 27019:2017 [2020], Information technology - Security techniques - Information security controls for the energy utility industry (withdrawal of INCITS/ISO/IEC 27019:2017 [2020])

NIST/ITL (National Institute of Standards and Technology/Information Technology Laboratory)

100 Bureau Drive MS 8940, Gaithersburg, MD 20899-8900 | Jennifer.stathakis@nist.gov, www.nist.gov

BSR/NIST-ITL 1-202x, Data Format for the Interchange of Fingerprint, Face & Other Biometric Information (revision of ANSI/NIST-ITL 1-2011 Update:2015)

NSF (NSF International)

789 N. Dixboro Road, Ann Arbor, MI 48105 | cleone@nsf.org, www.nsf.org

BSR/NSF/CAN 61-202x (i193r1), Drinking Water System Components - Health Effects (revision of ANSI/NSF/CAN 61-2024)

VITA (VMEbus International Trade Association (VITA))

929 W. Portobello Avenue, Mesa, AZ 85210 | jing.kwok@vita.com, www.vita.com

BSR/VITA 47.2-202x, Class 2 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (revision of ANSI/VITA 47.2-2019)

VITA (VMEbus International Trade Association (VITA))

929 W. Portobello Avenue, Mesa, AZ 85210 | jing.kwok@vita.com, www.vita.com

BSR/VITA 47.3-202x, Class 3 Requirements for Environments, Design and Construction, Safety, and Quality for VITA 47 Plug-In Modules Dot Standard (revision of ANSI/VITA 47.3-2019)

VITA (VMEbus International Trade Association (VITA))

929 W. Portobello Avenue, Mesa, AZ 85210 | jing.kwok@vita.com, www.vita.com

BSR/VITA 67.3-202x, Coaxial Interconnect on VPX, Spring-Loaded Contact on Backplane (revision of ANSI/VITA 67.3 -2023)

American National Standards (ANS) Announcements

Corrections

ITI (INCITS) - InterNational Committee for Information Technology StandardsInterNational Committee for Information Technology Standards

INCITS 468-2010 [R2025]

The final action publication for INCITS 468, which was originally published as a reaffirmation in the 5/12/25 issue of Standards Action, has been corrected to be published under stabilized maintenance of the current standard.

Please direct inquiries to: Kim Quigley <kquigley@itic.org>

American National Standards (ANS) Process

Please visit ANSI's website (www.ansi.org) for resources that will help you to understand, administer and participate in the American National Standards (ANS) process. Documents posted at these links are updated periodically as new documents and guidance are developed, whenever ANS-related procedures are revised, and routinely with respect to lists of proposed and approved ANS. The main ANS-related linkis www.ansi.org/asd and here are some direct links as well as highlights of information that is available:

Where to find Procedures, Guidance, Interpretations and More…

Please visit ANSI's website (www.ansi.org)

• ANSI Essential Requirements: Due process requirements for American National Standards (always current edition):

www.ansi.org/essentialrequirements

• ANSI Standards Action (weekly public review announcements of proposed ANS and standards developer accreditation applications, listing of recently approved ANS, and proposed revisions to ANS-related procedures):

www.ansi.org/standardsaction

• Accreditation information – for potential developers of American National Standards (ANS):

www.ansi.org/sdoaccreditation

• ANS Procedures, ExSC Interpretations and Guidance (including a slide deck on how to participate in the ANS process and the BSR-9 form):

www.ansi.org/asd

• Lists of ANSI-Accredited Standards Developers (ASDs), Proposed ANS and Approved ANS:

www.ansi.org/asd

• American National Standards Key Steps:

www.ansi.org/anskeysteps

• American National Standards Value:

www.ansi.org/ansvalue

• ANS Web Forms for ANSI-Accredited Standards Developers:

https://www.ansi.org/portal/psawebforms/

• Information about standards Incorporated by Reference (IBR):

https://ibr.ansi.org/

• ANSI - Education and Training:

www.standardslearn.org

Meeting Notices (Standards Developers)

ANSI Accredited Standards Developer

ASSP (ASC A10) - American Society of Safety ProfessionalsSafety Requirements for Construction and Demolition Operations

Meeting Time: August 19, 2025 at 12:30 pm

The American Society of Safety Professionals (ASSP) serves as the secretariat of the A10 Committee for Construction and Demolition Operations. The next meeting of the A10 Committee will be held on August 19th in Washington, DC. The meeting will start at approximately 12:30 p.m. until conclusion. For more information on attending please contact
Tim Fisher (TFisher@assp.org) at ASSP. Thank you.

American National Standards Under Continuous Maintenance

The ANSI Essential Requirements: Due Process Requirements for American National Standards provides two options for the maintenance of American National Standards (ANS): periodic maintenance (see clause 4.7.1) and continuous maintenance (see clause 4.7.2). Continuous maintenance is defined as follows:

The standard shall be maintained by an accredited standards developer. A documented program for periodic publication of revisions shall be established by the standards developer. Processing of these revisions shall be in accordance with these procedures. The published standard shall include a clear statement of the intent to consider requests for change and information on the submittal of such requests. Procedures shall be established for timely, documented consensus action on each request for change and no portion of the standard shall be excluded from the revision process. In the event that no revisions are issued for a period of four years, action to reaffirm or withdraw the standard shall be taken in accordance with the procedures contained in the ANSI Essential Requirements. The Executive Standards Council (ExSC) has determined that for standards maintained under the Continuous Maintenance option, separate PINS announcements are not required. The following ANSI Accredited Standards Developers have formally registered standards under the Continuous Maintenance option.

AAMI (Association for the Advancement of Medical Instrumentation)

AARST (American Association of Radon Scientists and Technologists)

AGA (American Gas Association)

AGSC (Auto Glass Safety Council)

ASC X9 (Accredited Standards Committee X9, Incorporated)

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

ASME (American Society of Mechanical Engineers)

ASTM (ASTM International)

GBI (Green Building Initiative)

HL7 (Health Level Seven)

Home Innovation (Home Innovation Research Labs)

IES (Illuminating Engineering Society)

ITI (InterNational Committee for Information Technology Standards)

MHI (Material Handling Industry)

NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)

NCPDP (National Council for Prescription Drug Programs)

NEMA (National Electrical Manufacturers Association)

NFRC (National Fenestration Rating Council)

NISO (National Information Standards Organization)

NSF (NSF International)

PHTA (Pool and Hot Tub Alliance)

RESNET (Residential Energy Services Network, Inc.)

SAE (SAE International)

TCNA (Tile Council of North America)

TIA (Telecommunications Industry Association)

TMA (The Monitoring Association)

ULSE (UL Standards & Engagement)

To obtain additional information with regard to these standards, including contact information at the ANSI Accredited Standards Developer, please visit ANSI Online at www.ansi.org/asd, select “American National Standards Maintained Under Continuous Maintenance.” Questions? psa@ansi.org.

ANSI-Accredited Standards Developers (ASD) Contacts

The addresses listed in this section are to be used in conjunction with standards listed in PINS, Call for Comment, Call for Members and Final Actions. This section is a list of developers who have submitted standards for this issue of *Standards Action* – it is not intended to be a list of all ANSI-Accredited Standards Developers. Please send all address corrections to the PSA Department at psa@ansi.org.

AAMI
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APCO
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www.apcoIntl.org

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API
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ASA (ASC S2)
Acoustical Society of America
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Raegan Ripley
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ISO & IEC Draft International Standards

This section lists proposed standards that the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) are considering for approval. The proposals have received substantial support within the technical committees or subcommittees that developed them and are now being circulated to ISO and IEC members for comment and vote. Standards Action readers interested in reviewing and commenting on these documents should order copies from ANSI.

COMMENTS

Comments regarding ISO documents should be sent to ANSI's ISO Team (isot@ansi.org); comments on ISO documents must be submitted electronically in the approved ISO template and as a Word document as other formats will not be accepted.

Those regarding IEC documents should be sent to the USNC/IEC team at ANSI's New York offices (usnc@ansi.org). The final date for offering comments is listed after each draft.

ORDERING INSTRUCTIONS

ISO and IEC Drafts can be made available by contacting ANSI's Customer Service department. Please e-mail your request for an ISO or IEC Draft to Customer Service at sales@ansi.org. When making your request, please provide the date of the Standards Action issue in which the draft document you are requesting appears.

ISO Standards

Applications of statistical methods (TC 69)

ISO 13528:2022/DAmd 1, - Amendment 1: Statistical methods for use in proficiency testing by interlaboratory comparison - Amendment 1 - 9/29/2025, $33.00

Biotechnology (TC 276)

ISO/DIS 23494-3, Biotechnology - Provenance information model for biological material and data - Part 3: Provenance of Biological Material - 9/26/2025, $62.00

Document imaging applications (TC 171)

ISO/DIS 15801.2, Document management - Electronically stored information - Requirements for trustworthiness and reliability - 7/17/2025, $107.00

Environmental management (TC 207)

ISO/DIS 14002-3, Environmental management systems - Guidelines for using ISO 14001 to address environmental aspects and conditions within an environmental topic area - Part 3: Climate - 9/26/2025, $146.00

Fine ceramics (TC 206)

ISO/DIS 14705, Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for hardness of monolithic ceramics at room temperature - 10/2/2025, $82.00

Freight containers (TC 104)

ISO/DIS 6346, Freight containers - Coding, identification and marking - 9/29/2025, $88.00

Lifts, escalators, passenger conveyors (TC 178)

ISO/DIS 8104-1, Improvement of safety and accessibility on existing lifts, escalators and moving walks - Part 1: Improvement of safety of passengers and goods passenger lifts - 9/29/2025, $125.00

Machine tools (TC 39)

ISO/DIS 19085-1, Woodworking machines - Safety - Part 1: Common requirements - 9/25/2025, $119.00

Materials, equipment and offshore structures for petroleum and natural gas industries (TC 67)

ISO/DIS 23414, Oil and gas industries including low carbon energy - Workover rigs for offshore fixed platforms - 9/27/2025, $134.00

ISO/DIS 24817, Petroleum, petrochemical and natural gas industries - Composite repairs for pipework - Qualification and design, installation, testing and integrity management - 9/25/2025, $155.00

ISO/DIS 28300, Venting atmospheric and low-pressure storage tanks - 9/26/2025, $155.00

Mechanical testing of metals (TC 164)

ISO/DIS 1099, Metallic materials - Fatigue testing - Axial force-controlled method - 9/28/2025, $88.00

Packaging (TC 122)

ISO/DIS 8367-1, Packaging - Dimensional tolerances for general purpose sacks - Part 1: Paper sacks - 9/26/2025, $29.00

Paints and varnishes (TC 35)

ISO/DIS 25014, Paints and varnishes - Coatings on concrete - Determination of film thickness on cross section - 9/27/2025, $33.00

Plastics (TC 61)

ISO/DIS 15270-4, Plastics - Guidelines for the recovery and recycling of plastics waste - Part 4: Chemical recycling - 10/2/2025, $71.00

Pulleys and belts (including veebelts) (TC 41)

ISO/DIS 4195, Conveyor belts with heat-resistant rubber covers - Heat resistance of covers - Requirements and test methods - 9/28/2025, $40.00

Road vehicles (TC 22)

ISO/DIS 4925, Road vehicles - Specification of non-petroleum-based brake fluids for hydraulic systems - 9/28/2025, $93.00

ISO/DIS 8715-1, Electric road vehicles - Road operating characteristics - Part 1: Passenger cars and light duty vehicles - 9/29/2025, $62.00

Small craft (TC 188)

ISO/DIS 9094, Small craft - Fire protection - 9/26/2025, $93.00

Soil quality (TC 190)

ISO/DIS 18400-206, Soil quality - Sampling - Part 206: Collection, handling and storage of soil under aerobic conditions for the assessment of microbiological processes, biomass and diversity in the laboratory - 9/29/2025, $53.00

Steel (TC 17)

ISO/DIS 21763, Guideline for Smart Manufacturing in Iron and Steel Industry - 10/2/2025, $71.00

Steel and aluminium structures (TC 167)

ISO/DIS 18954.2, Steel structures - Structural bolting - Test method to determine parameters of bolt tightening procedures - 7/20/2025, $62.00

(TC 343)

ISO/UNDP DIS 53001, Management systems for United Nations Sustainable Development Goals (SDGs) - Requirements - 9/26/2025, $107.00

Textiles (TC 38)

ISO/DIS 22195-9, Textiles - Determination of index ingredient from coloured textile - Part 9: Gallnut - 9/26/2025, $33.00

Tourism and related services (TC 228)

ISO/DIS 18980, Tourism and related services - Camping tourism - Requirements and recommendations for campsite facilities and services - 10/2/2025, $53.00

Traditional Chinese medicine (TC 249)

ISO/DIS 25187, Traditional Chinese medicine - Minimum requirements for robust TLC identification methods applicable for medicinal herbs and natural products - 9/25/2025, FREE

Water quality (TC 147)

ISO/DIS 11704, Water quality - Gross alpha and gross beta activity - Test method using liquid scintillation counting - 9/27/2025, $77.00

ISO/IEC JTC 1, Information Technology

ISO/IEC DIS 22237-5, Information technology - Data centre facilities and infrastructures - Part 5: Telecommunications cabling infrastructure - 9/28/2025, $125.00

ISO/IEC DIS 25005-1, Information technology - Data use in smart cities - Part 1: Framework - 9/27/2025, $82.00

IEC Standards

Automatic controls for household use (TC 72)

72/1505/CD, IEC 60730-1/AMD1/FRAG6 ED6: Fragment 6: Scope and Ae controls, 09/05/2025

Bare aluminium conductors (TC 7)

7/762/CD, IEC 63559 ED1: Concentric lay overhead electrical stranded conductors, 10/03/2025

7/763/NP, PNW 7-763 ED1: Overhead electrical conductors - Stress-strain test method for stranded conductors, 10/03/2025

Cables, wires, waveguides, r.f. connectors, and accessories for communication and signalling (TC 46)

46C/1322/CD, IEC 62783-3 ED1: Twinax cables for digital communication - Part 3: Family specification - Cable for SAS physical interfaces, 09/05/2025

Electric traction equipment (TC 9)

9/3226/CDV, IEC 62888-1 ED2: Railway applications - Energy measurement on board trains - Part 1: General, 10/03/2025

9/3227/CDV, IEC 62888-2 ED2: Railway applications - Energy measurement on board trains - Part 2: Energy measurement, 10/03/2025

9/3229/CDV, IEC 62888-4 ED2: Railway applications - Energy measurement on board trains - Part 4: Communication, 10/03/2025

9/3230/CDV, IEC 62888-5 ED2: Railway applications - Energy measurement on board trains - Part 5: Conformance test, 10/03/2025

9/3231/CDV, IEC 62888-6 ED2: Railway applications - Energy measurement on board trains - Part 6: Requirements for purposes other than billing, 10/03/2025

Electrical apparatus for explosive atmospheres (TC 31)

31G/426/FDIS, IEC 60079-25/AMD1 ED3: Amendment 1 - Explosive atmospheres - Part 25: Intrinsically safe electrical systems, 08/22/2025

31/1880(F)/FDIS, IEC 60079-45 ED1: Explosive atmospheres - Part 45 - Electrical Ignition Systems for Internal Combustion Engines, 07/25/2025

Electrical installations of buildings (TC 64)

64/2768/NP, PNW TS 64-2768 ED1: Electrical installation guide - Part xxx: Application guides complying with IEC 60364 - Selection of conductor cross-sectional area and coordination with protective devices, 09/05/2025

Electrical installations of ships and of mobile and fixed offshore units (TC 18)

18/1990/CD, IEC 60092-507 ED4: Electrical installations in ships - Part 507: Small vessels, 10/03/2025

Electroacoustics (TC 29)

29/1206(F)/FDIS, IEC 61252 ED2: Electroacoustics - Personal sound exposure meters, 08/01/2025

Fibre optics (TC 86)

86A/2599(F)/FDIS, IEC 60793-2-60 ED2: Optical fibres - Part 2 -60: Product specifications - Sectional specification for category C single-mode interconnection fibres, 08/01/2025

86B/5098/CD, IEC 61300-3-6 ED4: Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss, 09/05/2025

86B/5099/CD, IEC 61753-085-03 ED1: FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS - PERFORMANCE STANDARD - Part 085-03: Non-connectorized single-mode pigtailed CWDM devices for category OP - Outdoor protected environment, 09/05/2025

86B/5100/CD, IEC 61753-085-06 ED1: FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS - PERFORMANCE STANDARD - Part 085-06: Non-connectorized single-mode pigtailed CWDM devices for category OP+ - Extended outdoor protected environment, 09/05/2025

86A/2609/DTR, IEC TR 63431 ED1: Optical fibre cables - Microduct technology - Guidance, 08/08/2025

Fuses (TC 32)

32B/777/CD, IEC 60269-100 ED1: Low-Voltage Fuses. Part 100: General requirements and tests, 09/05/2025

32C/669/NP, PNW 32C-669 ED1: Current fuse-links with auxiliary heating function, 10/03/2025

Insulators (TC 36)

36/629/CD, IEC TS 63432 ED1: RTV silicone rubber coated insulators for AC and DC high-voltage applications - definitions, test methods and acceptance criteria, 09/05/2025

36A/270/DTS, IEC TS 63493-1 ED1: Transformer bushings dimensional standardization - Part 1: Medium voltage bushings with Um from 12 kV up to and including 52 kV and Ir from 630 A up to and including 3150 A, 09/05/2025

Lamps and related equipment (TC 34)

34A/2455/CDV, IEC 63553 ED1: Fully flexible Organic Light Emitting Diode (OLED) panels for general lighting - Performance requirements, 10/03/2025

Power electronics (TC 22)

22H/338/CDV, IEC 62040-1 ED3: Uninterruptible power systems (UPS) - Part 1: Safety requirements, 10/03/2025

Printed Electronics (TC 119)

119/552/CD, IEC TR 62899-525-1 ED1: Printed electronics - Part 525-1: Quality Assessment - R2R printed NFC QR code label for anticounterfeiting, 09/05/2025

Safety of Electronic Equipment within the Field of Audio/Video, Information Technology and Communication Technology (TC 108)

108/849/CD, IEC 62368-1/AMD1 ED4: Amendment 1 - Audio/video, information and communication technology equipment - Part 1: Safety requirements, 09/05/2025

Secondary cells and batteries (TC 21)

21A/946/FDIS, IEC 62133-1 ED2: Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 1: Nickel systems - Single and multi-phase applications are included., 08/22/2025

Semiconductor devices (TC 47)

47A/1193/CD, IEC 62228-3 ED2: Integrated circuits - EMC evaluation of transceivers - Part 3: CAN transceivers, 09/05/2025

Solar photovoltaic energy systems (TC 82)

82/2469/CD, IEC 62788-2-1/AMD1 ED1: Amendment 1 - Measurement procedures for materials used in photovoltaic modules - Part 2-1: Polymeric materials - Frontsheet and backsheet - Safety requirements, 09/05/2025

82/2473/CD, IEC TS 62257-410 ED1: Renewable energy off-grid systems - Part 410: Laboratory evaluation of lamps and lighting appliances for off-grid electricity systems, 09/05/2025

82/2471/CD, IEC TS 63556 ED1: Coupled-stress acceleration test sequence for photovoltaic modules and materials, 09/05/2025

Solar thermal electric plants (TC 117)

117/230/CD, IEC 62862-2-2 ED1: Solar thermal electric plants - Part 2-2: Thermal energy storage systems - Technical requirements for molten salt used as heat storage and heat transfer medium., 09/05/2025

Surface mounting technology (TC 91)

91/2046/CDV, IEC 63516 ED1: Fixed folding durability test method for flexible opto-electric circuit boards, 10/03/2025

Switchgear and controlgear (TC 17)

17C/978/NP, PNW TS 17C-978 ED1: DC Rigid Gas-Insulated Transmission Line For Rated Voltage above 100kV, 09/05/2025

(TC)

JTC3/119/NP, PNW TS JTC3-119 ED1: Quantum technologies - Cross-cutting and enabling devices and technologies: Hanbury-Brown-Twiss interferometry for the characterization of photonic quantum sources, 10/03/2025

(TC 123)

123/117/CDV, IEC 63223-2 ED1: Management of network assets in power systems - Risk-informed decision-making process, 10/03/2025

Terminology (TC 1)

1/2661/ED, IEC 60050-C00105 ED0: IEC 60050-602 International Electrotechnical Vocabulary (IEV) - Part 602: Generation, transmission and distribution of electricity - Generation, 09/05/2025

1/2662/ED, IEC 60050-C00106 ED0: IEC 60050-603 International Electrotechnical Vocabulary (IEV) - Part 603: Generation, transmission and distribution of electricity - Power systems planning and management, 09/05/2025

1/2663/ED, IEC 60050-C00107 ED0: IEC 60050-605: AMDInternational Electrotechnical Vocabulary (IEV) - Part 605: Generation, transmission and distribution of electricity - Substations, 09/05/2025

1/2664/ED, IEC 60050-C00108 ED0: IEC 60050-614 International Electrotechnical Vocabulary (IEV) - Part 614: Generation, transmission and distribution of electricity - Operation, 09/05/2025

1/2665/ED, IEC 60050-C00109 ED0: IEC 60050-691 International Electrotechnical Vocabulary (IEV) - Part 691: Tariffs for electricity, 09/05/2025

ISO/IEC JTC 1, Information Technology

ISO & IEC Draft International Standards

(TC)

JTC1-SC41/532/CD, ISO/IEC 30199 ED1: Internet of Things (IoT) - Smart onshore aquaculture - General and technical requirements, 09/05/2025

Newly Published ISO & IEC Standards

Listed here are new and revised standards recently approved and promulgated by ISO - the International Organization for Standardization – and IEC – the International Electrotechnical Commission. Most are available at the ANSI Electronic Standards Store (ESS) at www.ansi.org. All paper copies are available from Standards resellers (http://webstore.ansi.org/faq.aspx#resellers).

ISO Standards

Acoustics (TC 43)

ISO 17201-2:2025, Acoustics - Noise from shooting ranges - Part 2: Calculation of muzzle blast, $172.00

Agricultural food products (TC 34)

ISO 18449:2025, Green tea - Vocabulary, $259.00

ISO 23719:2025, Cereals and cereal products - Determination of 17 mycotoxins by ultra-high-performance liquid chromatography and tandem mass spectrometry method (UHPLC-MS/MS), $230.00

Aircraft and space vehicles (TC 20)

ISO 21384-4:2025, Uncrewed aircraft systems - Part 4: Vocabulary, $84.00

Compressors, pneumatic tools and pneumatic machines (TC 118)

ISO 8573-5:2025, Compressed air - Contaminant measurement - Part 5: Oil vapour content, $84.00

Corrosion of metals and alloys (TC 156)

ISO 23225:2025, Corrosion control engineering life cycle in nuclear power plants - General requirements, $84.00

Fasteners (TC 2)

ISO 13669:2025, Fasteners - Grooved pins - General requirements, $127.00

Fine ceramics (TC 206)

ISO 4255:2025, Fine ceramics (advanced ceramics, advanced technical ceramics) - Mechanical properties of ceramic composites at high temperature - Determination of axial tensile properties of tubes, $172.00

Fire safety (TC 92)

ISO 834-7:2025, Fire-resistance tests - Elements of building construction - Part 7: Specific requirements for columns, $127.00

Geographic information/Geomatics (TC 211)

ISO 19109:2025, Geographic information - General feature model and rules for application schema, $259.00

ISO 19152-4:2025, Geographic information - Land Administration Domain Model (LADM) - Part 4: Valuation information, $259.00

Jewellery (TC 174)

ISO 19376-1:2025, Jewellery and precious metals - Vocabulary - Part 1: Precious metals and units, $127.00

Mining (TC 82)

ISO 22932-7:2025, Mining - Vocabulary - Part 7: Ventilation, $172.00

ISO 22932-8:2025, Mining - Vocabulary - Part 8: Extraction, $259.00

Non-destructive testing (TC 135)

ISO 16828:2025, Non-destructive testing - Ultrasonic testing - Time-of-flight diffraction technique for detection and sizing of discontinuities, $172.00

Nuclear energy (TC 85)

ISO 19361:2025, Measurement of radioactivity - Determination of beta emitters activities - Test method using liquid scintillation counting, $172.00

Optics and optical instruments (TC 172)

ISO 6760-1:2025, Optics and photonics - Test method for temperature coefficient of refractive index of optical glasses - Part 1: Minimum deviation method, $172.00

ISO 17123-11:2025, Optics and optical instruments - Field procedures for testing geodetic and surveying instruments - Part 11: GNSS instruments, $201.00

Other

IWA 44:2025, $201.00

Petroleum products and lubricants (TC 28)

ISO 19970:2025, Refrigerated hydrocarbon and non-petroleum based liquefied gaseous fuels - Metering of gas as fuel on LNG carriers during cargo transfer operations, $127.00

Photography (TC 42)

ISO 3664:2025, Graphic technology and photography - Viewing conditions, $201.00

Plastics (TC 61)

ISO 8606:2025, Fibre-reinforced plastics - Bulk moulding compound (BMC) and dough moulding compound (DMC) - Requirements and specifications, $84.00

Steel (TC 17)

ISO 9556:2025, Steel and iron - Determination of total carbon content - Infrared absorption method after combustion in an induction furnace, $127.00

Terminology (principles and coordination) (TC 37)

ISO 24635-1:2025, Language resource management - Corpus annotation project management - Part 1: Core model, $172.00

Textiles (TC 38)

ISO 17971:2025, Textiles - Smart textiles - Test method for determining the screen-touch properties of fabrics, $127.00

Transport information and control systems (TC 204)

ISO 13140:2025, Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to ISO 13141, $230.00

ISO 24298:2025, Intelligent transport systems - Public transport - Light emitting diode (LED) destination board system for public transport buses, $172.00

ISO Technical Reports

Sizing system, designations and marking for boots and shoes (TC 137)

ISO/TR 25295:2025, Footwear - Global last measurement systems, $201.00

ISO Technical Specifications

Fire safety (TC 92)

ISO/TS 19677:2025, Assessing the adverse impact of wildland fires on the environment and to people through environmental exposure, $172.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 18026:2025, Information technology - Spatial reference model (SRM), $287.00

ISO/IEC 30186:2025, Digital twin - Maturity model and guidance for a maturity assessment, $201.00

ISO/IEC 19785-3:2025, Information technology - Common Biometric Exchange Formats Framework - Part 3: Patron format specifications, $287.00

ISO/IEC 27553-2:2025, Information security, cybersecurity and privacy protection - Security and privacy requirements for authentication using biometrics on mobile devices - Part 2: Remote modes, $230.00

ISO/IEC 10192-4-3:2025, Information technology - Home electronic system (HES) interfaces - Part 4-3: Common user interface and cluster-to-cluster interface to support interworking among home cluster systems - Messaging, $172.00

ISO/IEC 14496-10:2025, Information technology - Coding of audio-visual objects - Part 10: Advanced video coding, $287.00

IEC Standards

Electrical accessories (TC 23)

IEC 63044-3 Amd.1 Ed. 1.0 b:2021, Amendment 1 - Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 3: Electrical safety requirements, $26.00

Fibre optics (TC 86)

IEC 62007-2 Ed. 3.0 b:2025, Semiconductor optoelectronic devices for fibre optic system applications - Part 2: Measuring methods, $361.00

IEC 62007-2 Ed. 3.0 en:2025, Semiconductor optoelectronic devices for fibre optic system applications - Part 2: Measuring methods, $361.00

Safety of household and similar electrical appliances (TC 61)

IEC 60335-2-104 Ed. 2.0 b:2021, Household and similar electrical appliances - Safety - Part 2-104: Particular requirements for appliances to recover and/or recycle refrigerant from air conditioning and refrigeration equipment, $361.00

International Organization for Standardization (ISO)

Call for U.S. TAG Administrator

ISO/TC 249 – Traditional medicine ISO/TC 249, ISO/TC 249/SC 1 – Traditional Chinese medicine, and ISO/TC 249/SC 2 Ayurveda and yoga

Comment Deadline: August 1, 2025

ISO/TC 249 was recently restructured and is now titled Traditional medicine, with two subcommittees: ISO/TC 249/SC 1 – Traditional Chinese medicine, and ISO/TC 249/SC 2 – Ayurveda and yoga.

There is currently no ANSI-accredited U.S. TAG Administrator for ISO/TC 249 was recently restructured and is now titled Traditional medicine, with two subcommittees: ISO/TC 249/SC 1 – Traditional Chinese medicine, and ISO/TC 249/SC 2 – Ayurveda and yoga; therefore, ANSI is not a member of these committees. The Secretariats for these committees are held by China (SAC) for ISO/TC 249 and ISO/TC 249/SC 1, and India (BIS) for ISO/TC 249/SC 2.

ISO/TC 249 and ISO/TC 249/SC 1 operates under the following scope:

Standardization in the field of medical systems derived from ancient Chinese medicine which shall be able to share one common set of standards. Both traditional and modern aspects of these systems are covered. The committee focuses on quality and safety of raw materials, manufactured products and medical devices and of informatics, including service standards limited to involving the safe use and delivery of devices & medicine, but not into the clinical practice or application of those products.

ISO/TC 249/SC 2 operates under the following scope:

Standardization in the field of Ayurveda and Yoga. Both traditional and modern aspects of products and services of these systems are covered. The committee will focus on following fields including but not limited to Terminology; Quality and Safety of ingredients, extracts, finished products, Ayurveda based dietary supplements and nutraceuticals, Ayurveda Pharmaceutical equipments and procedures; Health and Wellness service requirements; Health Assessment tools/equipment; Rejuvenative procedures and tools/equipment /devices; Yoga accessories, Yoga props and common yoga protocol practices.

Excluded: Standardization covered by

ISO/TC 54 - Essential oils
ISO/TC 215 - Health Informatics
ISO/TC 249 - Traditional Chinese Medicine

Organizations interested in serving as the U.S. TAG Administrator or participating on a U.S. TAG for any of these committees should contact ANSI's ISO Team (isot@ansi.org).

International Organization for Standardization (ISO)

Establishment of ISO Technical Committee

ISO/TC 8/SC 27 – Ports and terminals

Comment Deadline: July 18, 2025

A new ISO Technical Committee, **ISO/TC 8/SC 27 – *Ports and terminals***, has been formed. The Secretariat has been assigned to China (SAC).

ISO/TC 8/SC 27 operates under the following scope:

Standardization in the field of ports and terminals, covering planning, implementation, operation, upgrading, demolition and repurposing stages. It will include scheduling, design, controlling, monitoring and inspection, optimization of resource allocating, integrated state-of-the-art technology solutions, regardless of scales, types, or transitioning of goods or passengers, whether located on the coastline or inland rivers, aiming to improve efficiency, effectiveness, coordination, working conditions and professions, towards achieving sustainable development of ports and terminals.

Excluded: Relevant work within the scopes of the following committees:

Ships and marine technology (ISO/TC 8)
Production, transport and storage facilities for cryogenic liquefied gases (ISO/TC 67/SC 9)
Cranes (ISO/TC 96)
Industrial trucks (ISO/TC 110)
Tourism and related services (ISO/TC 228)
Sustainable cities and communities (ISO/TC 268)
Innovative logistics (ISO/TC 344)

The U.S. Coast Guard (USCG) has committed to administer the U.S. TAG. Organizations interested in participating on the U.S. TAG should contact ANSI's ISO Team (isot@ansi.org).

New Secretariats

ISO/TC 8/SC 25 – Maritime GHG reduction

Comment Deadline: August 8, 2025

Trident Maritime Systems, Inc. (TMS) has requested ANSI to delegate the responsibilities of the administration of the ISO/TC 8/SC 25 secretariat to Trident Maritime Systems, Inc. The secretariat was previously held by the U.S. Coast Guard (USCG) and the secretariat transfer is supported by the U.S. TAG.

ISO/TC 8/SC 25 operates under the following scope:

Standardization of ship GHG assessment and documentation procedures; bunkering and/or charging operations associated, and on-dock power generation.

Organizations wishing to comment on the delegation of the responsibilities should contact ANSI's ISO Team (isot@ansi.org).

Registration of Organization Names in the United States

The Procedures for Registration of Organization Names in the United States of America (document ISSB 989) require that alphanumeric organization names be subject to a 90-day Public Review period prior to registration. For further information, please contact the Registration Coordinator at (212) 642-4975.
When organization names are submitted to ANSI for registration, they will be listed here alphanumerically. Alphanumeric names appearing for the first time are printed in bold type. Names with confidential contact information, as requested by the organization, list only public review dates.

Public Review

NOTE: Challenged alphanumeric names are underlined. The Procedures for Registration provide for a challenge process, which follows in brief. For complete details, see Section 6.4 of the Procedures.

A challenge is initiated when a letter from an interested entity is received by the Registration Coordinator. The letter shall identify the alphanumeric organization name being challenged and state the rationale supporting the challenge. A challenge fee shall accompany the letter. After receipt of the challenge, the alphanumeric organization name shall be marked as challenged in the Public Review list. The Registration Coordinator shall take no further action to register the challenged name until the challenge is resolved among the disputing parties.

Proposed Foreign Government Regulations

Call for Comment

U.S. manufacturers, exporters, trade associations, U.S domiciled standards development organizations and conformity assessment bodies, consumers, or U.S. government agencies may be interested in proposed foreign technical regulations notified by Member countries of the World Trade Organization (WTO). In accordance with the WTO Agreement on Technical Barriers to Trade (TBT Agreement), Members are required to notify to the WTO Secretariat in Geneva, Switzerland proposed technical regulations that may significantly affect trade. In turn, the Secretariat circulates the notifications along with the full texts. The purpose of the notification requirement is to provide global trading partners with an opportunity to review and comment on the regulations before they become final. The USA Enquiry Point for the WTO TBT Agreement is located at the National Institute of Standards and Technology (NIST) in the Standards Coordination Office (SCO). The Enquiry Point relies on the WTO's ePing SPS&TBT platform to distribute the notified proposed foreign technical regulations (notifications) and their full texts available to U.S. stakeholders. Interested U.S. parties can register with ePing to receive e-mail alerts when notifications are added from countries and industry sectors of interest to them. The USA WTO TBT Enquiry Point is the official channel for distributing U.S. comments to the network of WTO TBT Enquiry Points around the world. U.S. business contacts interested in commenting on the notifications are asked to review the comment guidance prior to submitting comments. For non-notified foreign technical barriers to trade for non-agricultural products, stakeholders are encouraged to reach out as early as possible to the Office of Trade Agreements Negotiations and Compliance (TANC) in the International Trade Administration (ITA) at the Department of Commerce (DOC), which specializes in working with U.S. stakeholders to remove unfair foreign government-imposed trade barriers. The U.S. Department of Agriculture's Foreign Agricultural Service actively represents the interests of U.S. agriculture in the WTO committees on Agriculture, Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT). FAS alerts exporters to expected changes in foreign regulations concerning food and beverage and nutrition labeling requirements, food packaging requirements, and various other agriculture and food related trade matters. Working with other Federal agencies and the private sector, FAS coordinates the development and finalization of comments on measures proposed by foreign governments to influence their development and minimize the impact on U.S. agriculture exports. FAS also contributes to the negotiation and enforcement of free trade agreements and provides information about tracking regulatory changes by WTO Members. The Office of the United States Trade Representative (USTR) WTO & Multilateral Affairs (WAMA) office has responsibility for trade discussions and negotiations, as well as policy coordination, on issues related technical barriers to trade and standards-related activities.

Online Resources:
WTO's ePing SPS&TBT platform: https://epingalert.org/
Register for ePing: https://epingalert.org/en/Account/Registration
WTO committee on Agriculture, Sanitary and Phytosanitary (SPS) measures:
https://www.wto.org/english/tratop_e/sps_e/sps_e.htm
WTO Committee on Technical Barriers to Trade (TBT): https://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm
USA TBT Enquiry Point: https://www.nist.gov/standardsgov/usa-wto-tbt-enquiry-point
Comment guidance:
https://www.nist.gov/standardsgov/guidance-us-stakeholders-commenting-notifications-made-wto-members-tbt-committee
NIST: https://www.nist.gov/
TANC: https://www.trade.gov/office-trade-agreements-negotiation-and-compliance-tanc
Examples of TBTs: https://tcc.export.gov/report_a_barrier/trade_barrier_examples/index.asp.
Report Trade Barriers: https://tcc.export.gov/Report_a_Barrier/index.asp.
USDA FAS: https://www.fas.usda.gov/about-fas
FAS contribution to free trade agreements: https://www.fas.usda.gov/topics/trade-policy/trade-agreements
Tracking regulatory changes: https://www.fas.usda.gov/tracking-regulatory-changes-wto-members
USTR WAMA: https://ustr.gov/trade-agreements/wto-multilateral-affairs/wto-issues/technical-barriers-trade
Contact the USA TBT Enquiry Point at (301) 975-2918; E usatbtep@nist.gov or notifyus@nist.gov.

BSR/ASHRAE/IES Addendum ci
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum ci to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

Second Public Review (July 2025)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum updates the Building Performance Factors (BPFs) that are used for determining compliance with Appendix G (see section 4.2.1.1). The BPFs represent the regulated energy savings of a design minimally compliant with the current edition of Standard 90.1 compared to design compliant with Appendix G PRM baseline requirements. The BPFs are updated each cycle to align with changes made to the prescriptive and mandatory requirements of the Standard as quantified by energy simulation using prototype building models approved by SSPC 90.1 (https://www.energycodes.gov/prototype-building-models).

This 2nd PRD adjusts the BPF to align with the proposed ISC for addendum ca that adjusts the required energy credits in Table 11.5.1. The other change in this 2ndPRD is the removal of data center loads in the Large Office prototype when calculating the regulated energy for the BPF calculation. The Office occupancy BPF are all lower as a result of this change.

Cost effectiveness
This addendum impacts an optional performance path in the Standard designed to provide increased flexibility and therefore was not subjected to cost effectiveness analysis.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum ci to 90.1-2022

Revise Table 4.2.1.1 as follows:

Table 4.2.1.1 Building Performance Factor (BPF)

Table I3-1 Building Performance Factors (BPF), Site Energy

~~Building Area Type~~	~~Climate Zone~~																		
	~~0A~~	~~0B~~	~~1A~~	~~1B~~	~~2A~~	~~2B~~	~~3A~~	~~3B~~	~~3C~~	~~4A~~	~~4B~~	~~4C~~	~~5A~~	~~5B~~	~~5C~~	~~6A~~	~~6B~~	~~7~~	~~8~~
~~Multifamily~~	~~0.72~~	~~0.71~~	~~0.75~~	~~0.73~~	~~0.76~~	~~0.76~~	~~0.77~~	~~0.75~~	~~0.70~~	~~0.61~~	~~0.71~~	~~0.64~~	~~0.56~~	~~0.63~~	~~0.63~~	~~0.54~~	~~0.57~~	~~0.54~~	~~0.56~~
~~Healthcare/hospital~~	~~0.67~~	~~0.66~~	~~0.68~~	~~0.65~~	~~0.65~~	~~0.61~~	~~0.62~~	~~0.64~~	~~0.63~~	~~0.62~~	~~0.63~~	~~0.61~~	~~0.65~~	~~0.63~~	~~0.68~~	~~0.64~~	~~0.68~~	~~0.69~~	~~0.71~~
~~Hotel/motel~~	~~0.69~~	~~0.69~~	~~0.72~~	~~0.68~~	~~0.69~~	~~0.68~~	~~0.69~~	~~0.70~~	~~0.71~~	~~0.65~~	~~0.69~~	~~0.68~~	~~0.63~~	~~0.66~~	~~0.67~~	~~0.60~~	~~0.64~~	~~0.59~~	~~0.58~~
~~Office~~	~~0.54~~	~~0.54~~	~~0.53~~	~~0.52~~	~~0.52~~	~~0.52~~	~~0.50~~	~~0.54~~	~~0.47~~	~~0.47~~	~~0.52~~	~~0.48~~	~~0.49~~	~~0.52~~	~~0.49~~	~~0.48~~	~~0.50~~	~~0.43~~	~~0.46~~
~~Restaurant~~	~~0.64~~	~~0.61~~	~~0.60~~	~~0.59~~	~~0.60~~	~~0.57~~	~~0.61~~	~~0.62~~	~~0.61~~	~~0.66~~	~~0.65~~	~~0.66~~	~~0.69~~	~~0.69~~	~~0.68~~	~~0.71~~	~~0.71~~	~~0.72~~	~~0.74~~
~~Retail~~	~~0.51~~	~~0.49~~	~~0.48~~	~~0.48~~	~~0.44~~	~~0.43~~	~~0.43~~	~~0.44~~	~~0.44~~	~~0.47~~	~~0.45~~	~~0.50~~	~~0.52~~	~~0.47~~	~~0.52~~	~~0.52~~	~~0.50~~	~~0.48~~	~~0.49~~
~~School~~	~~0.52~~	~~0.57~~	~~0.57~~	~~0.56~~	~~0.52~~	~~0.53~~	~~0.53~~	~~0.52~~	~~0.55~~	~~0.42~~	~~0.49~~	~~0.53~~	~~0.44~~	~~0.50~~	~~0.51~~	~~0.43~~	~~0.42~~	~~0.42~~	~~0.44~~
~~Warehouse~~	~~0.26~~	~~0.26~~	~~0.22~~	~~0.25~~	~~0.21~~	~~0.22~~	~~0.25~~	~~0.21~~	~~0.18~~	~~0.38~~	~~0.27~~	~~0.31~~	~~0.46~~	~~0.37~~	~~0.31~~	~~0.49~~	~~0.42~~	~~0.43~~	~~0.47~~
~~All others~~	~~0.63~~	~~0.62~~	~~0.65~~	~~0.61~~	~~0.56~~	~~0.53~~	~~0.55~~	~~0.55~~	~~0.59~~	~~0.55~~	~~0.55~~	~~0.58~~	~~0.57~~	~~0.57~~	~~0.61~~	~~0.57~~	~~0.57~~	~~0.56~~	~~0.58~~

Building Area Type	Climate Zone																		
	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
Multifamily	0.61	0.57	0.60	0.57	0.59	0.57	0.58	0.58	0.46	0.55	0.57	0.55	0.54	0.56	0.57	0.53	0.53	0.54	0.59
Healthcare/hospital	0.60	0.59	0.59	0.60	0.60	0.60	0.58	0.59	0.56	0.56	0.57	0.58	0.58	0.57	0.53	0.57	0.55	0.55	0.57
Hotel/motel	0.58	0.56	0.57	0.56	0.55	0.54	0.54	0.54	0.53	0.53	0.53	0.52	0.53	0.53	0.53	0.53	0.53	0.52	0.53
Office	0.43	0.42	0.40	0.41	0.37	0.39	0.37	0.38	0.35	0.35	0.37	0.36	0.37	0.37	0.37	0.38	0.36	0.36	0.39
Restaurant	0.57	0.55	0.56	0.55	0.55	0.55	0.58	0.56	0.54	0.59	0.57	0.60	0.62	0.59	0.61	0.63	0.61	0.64	0.67
Retail	0.41	0.40	0.38	0.39	0.33	0.34	0.34	0.34	0.34	0.35	0.36	0.37	0.36	0.36	0.38	0.37	0.37	0.38	0.41
School	0.45	0.45	0.43	0.44	0.41	0.43	0.43	0.39	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.38	0.41
Warehouse	0.24	0.25	0.21	0.24	0.20	0.21	0.24	0.21	0.18	0.24	0.21	0.21	0.28	0.24	0.22	0.31	0.28	0.29	0.32
All others	0.53	0.51	0.50	0.51	0.44	0.42	0.43	0.42	0.42	0.43	0.42	0.44	0.44	0.43	0.45	0.44	0.44	0.45	0.47

BSR/ASHRAE/IES Addendum cz
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum cz to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

Second Public Review (July 2025)
(Draft Shows Proposed Independent Substantive Changes to the Previous Public Review Draft)

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FOREWORD

This 2nd ISC public review is in response to the U.S. Department of Energy's proposal to remove coverage of "fans and blowers" and "air circulating fans." At the time of publishing, SSPC 90.1 does not know if the respective test procedures, Appendix A to Subpart J of 10 CFR Part 431 and Appendix B to Subpart J of 10 CFR Part 431, will be rescinded in the near future. The proposed language is intended to account for the possibility.

There is no change to the cost of construction.

[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the previous draft are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.]

Addendum cz to 90.1-2022

Add the following definitions to Section 3.2 (I-P and SI):

fan energy index (FEI): the ratio of the electric input power of a reference fan to the electric input power of the actual fan as calculated per 10 CFR Part 431 ~~for U.S. applications~~ if required, ~~or,~~ otherwise, calculated per AMCA 208 ~~for applications outside the U.S~~.

Make the following changes to Section 6.4.7(I-P and SI):

Table 6.4.7 Performance Rating Procedures for Equipment Without Minimum Efficiency Requirements ~~System Components~~

Equipment	Rating Procedure
Plate-type liquid-to-liquid heat exchangers	AHRI 400
Fin-and-tube heating and cooling coils (hydronic and DX)	AHRI 410
Exhaust air energy recovery heat exchangers	AHRI 1060
Air circulating fans with input power ≥200W	~~Subpart J to Appendix B of 10 CFR Part 431~~Appendix B to Subpart J of 10 CFR Part 431, if required, otherwise use AMCA 230.

6.4.7 Performance Rating Requirements for Equipment Without Minimum Efficiency Requirements ~~System Components~~. The *equipment* listed in Table 6.4.7 shall be rated in accordance with the rating procedure listed.

Make the following changes to Section 6.5.3.1.3 (I-P and SI):

6.5.3.1.3 Fan Efficiency. Each fan and *fan array* shall have a *fan energy index (FEI)* of 1.00 or higher at its highest design airflow rate. Each fan and *fan array* ~~-~~used for a *variable-air-volume system* that meets the requirements of Section 6.5.3.2.1 shall have an *FEI* of 0.95 or higher at its highest design airflow rate.

6.5.3.1.3.1 The FEI for individual fans shall be determined in accordance with 10 CFR Part 431, if required, ~~or,~~ otherwise, use AMCA 208~~, outside of the U.S~~. The fan *FEI* shall be indicated on the construction documents to allow for compliance verification by the *AHJ*.

…

BSR/ASHRAE/IES Addendum dc
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum dc to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

First Public Review (July 2025)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

This addendum updates the language in the Heat Pump water Heater Energy Credit to better align the credit with how commercial heat pump water heaters are tested under the US Department of Energy Test Procedure. The energy credit values have been re-calculated to reflect the changes in credit requirements for commercial equipment.

Cost effectiveness
This addendum impacts an optional performance path in the Standard designed to provide increased flexibility and therefore was not subjected to cost effectiveness analysis.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum dc to 90.1-2022

Modify Section 11.5.2.3.1 item b as follows

b. **W02: Heat-Pump Water Heater.** To achieve this credit, air source heat-pump *water heater*s shall be installed according to the *manufacturer*'s instructions, and at least 30% of design end-use *service water heating* requirements shall be met using only heat-pump heating at an ambient condition of 67.5°F(19.7°C) db without supplemental *electric resistance* or *fossil fuel* heating. For a hybrid heat-pump *water heater*, the heat-pump-only capacity shall be deemed at 40% of first hour draw. Where the heat-pump-only capacity exceeds 50% of the design end-use load, excluding *recirculating system* losses, the credits from the Sec- tion 11.5.3 tables shall be prorated as follows:

$$EC_{W02\_calc} = EC_{W02\_base} \times \frac{Cap_{HPWH}}{EndLoad \times 0.5} \quad \text{~~(not greater than 2)~~}$$

where

EC_{W02_calc} = *energy* credits achieved for heat-pump *water heater*. $EC_{W02\ calc}$ shall not be greater than 2.0 * EC_{BASE}

EC_{W02_base} = W02 base *energy* credit from Section 11.5.3

Cap_{HPWH} = heat-pump-only capacity at ~~50°F(10°C)~~ 80.6°F(27°C) entering air and 70°F(21°C) without supplemental *electric resistance* or *fossil fuel* heat, Btu/h

EndLoad = end-use peak hot-water load, excluding load for *heat trace* or recirculation, Btu/h The heat-pump *service water heating system* shall comply with the following requirements:

1. For central *systems* with an installed total output capacity of more than 100,000 Btu/h at an ambient condition of 67.5°F(19.7°C) db, a preheat storage tank with ≥0.75 gal per 1000 Btu/h of design end-use *ser- vice water heating* requirements shall be heated only with heat-pump heating when the ambient temperature is >45°F(7.2°C)
2. For *systems* with *piping* temperature maintenance, either a *heat trace system* or a separate *water heater* in series for *recirculating system* and final heating shall be installed.

3. Heat-pump *water heater efficiency* shall meet or exceed one of the following:
   i. Output-capacity-weighted-average uniform *energy factor* (UEF) of 3.0 with a medium draw pattern in accordance with 10 CFR 430 Appendix E.
   ii. Output-capacity-weighted-average COP of not less than 4.0 tested at ~~50°F(10°C)~~ 80.6°F(27°C) entering air and 70°F(21°C) entering water in accordance with ~~AHRI Standard 1300~~Subpart G to 10 CFR Part 431.

Table 11.5.3-1 Energy Credits for Multifamily

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	11.5.2.3.1.b	~~16~~	~~17~~	~~20~~	~~20~~	~~24~~	~~25~~	~~30~~	~~29~~	~~36~~	~~33~~	~~33~~	~~39~~	~~36~~	~~36~~	~~41~~	~~35~~	~~37~~	~~37~~	~~38~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	13	13	16	15	22	20	20	21	27	15	24	19	14	19	25	12	13	11	3

Table 11.5.3-2 Energy Credits for Health Care Buildings

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2

Table 11.5.3-3 Energy Credits for Hotel/Motel

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~5~~	~~5~~	~~7~~	~~6~~	~~8~~	~~8~~	~~10~~	~~10~~	~~11~~	~~12~~	~~11~~	~~13~~	~~13~~	~~12~~	~~14~~	~~13~~	~~13~~	~~14~~	~~14~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	12	12	13	13	13	14	13	14	13	12	13	12	12	12	11	11	11	10	10

Table 11.5.3-4 Energy Credits for Office Buildings

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	2	2	3	3	3	3	3	4	3	3	4	3	3	3	4	3	3	3	3

Table 11.5.3-5 Energy Credits for Restaurant Buildings

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~2~~	~~3~~	~~3~~	~~3~~	~~4~~	~~5~~	~~6~~	~~6~~	~~7~~	~~8~~	~~7~~	~~9~~	~~9~~	~~9~~	~~10~~	~~9~~	~~10~~	~~10~~	~~10~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	10	10	11	11	11	12	10	12	12	9	11	9	8	9	8	7	8	7	5

Table 11.5.3-6 Energy Credits Retail Buildings

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~1~~	~~1~~	~~1~~	~~1~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	2	2	3	2	3	3	3	2	4	2	2	2	2	2	1	2	2	1	1

Table 11.5.3-7 Energy Credits Education Buildings

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~3~~	~~3~~	~~3~~	~~3~~	~~3~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	2	2	3	3	3	3	3	3	4	3	3	3	2	3	3	2	2	2	2

Table 11.5.3-8 Energy Credits for Warehouses

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	3	2	4	3	4	3	2	3	7	1	2	1	0	1	1	0	0	0	0

Table 11.5.3-9 Energy Credits for Other Buildings

ID	Energy Credit Measure	Section	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
~~W02~~	~~Heat Pump Water Heater~~	~~11.5.2.3.1.b~~	~~4~~	~~4~~	~~4~~	~~4~~	~~5~~	~~6~~	~~7~~	~~6~~	~~8~~	~~8~~	~~7~~	~~9~~	~~8~~	~~8~~	~~9~~	~~8~~	~~9~~	~~9~~	~~9~~
W02	Heat Pump Water Heater	11.5.2.3.1.b	6	6	7	6	8	8	7	8	9	6	8	6	5	6	7	5	5	4	3

BSR/ASHRAE/IES Addendum dd
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum dd to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

First Public Review (July 2025)
(Draft Shows Proposed Changes to Current Standard)

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BSR/ASHRAE/IES Addendum dd to ANSI/ASHRAE/IES Standard 90.1-2022, *Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings*
First Public Review Draft

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FOREWORD

This addendum proposes editorial changes to Table 12.5.1 to clarify requirements added into the ASHRAE 90.1 in Addendum ck to 90.1-2016 and Addendum bh to 90.1-2019. Specifically this addendum makes the following changes:

1. *Clarifies that the W/ft^2 capacity in 10.5.1.1 should be used to determine capacity.*
2. *Clarifies the correct Temperature Coefficient is Temperature Coefficient of Power.*
3. *Corrects the conversion of the 45°C INOCT reference temperature to Fahrenheit.*

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Addendum dd to 90.1-2022

Modify Table 12.5.1, Part 15 On-Site Renewable Energy, Column B Budget Building Design, item b as follows:

b. Where no *system* exists or is specified to provide *on-site renewable energy* in the *proposed design*, *on-site renewable energy* shall be modeled as an unshaded photovoltaic system with the following physical characteristics:
   - Size: Rated capacity, in W/ft^2 (W/m^2), per Section 10.5.1.1.
   - Module Type: Crystalline silicon panel with a glass cover, 19.1% nominal efficiency and temperature coefficient of power of –0.19%/°F (-0.35%/°C); performance shall be based on a reference temperature of 77°F (25°C) and irradiance of 317 Btu/ft^2·h (1000 W/m^2).
   - Array Type: Rack-mounted array with installed nominal operating cell temperature (INOCT) of ~~103~~113°F (45°C)
   - Total system losses (DC output to AC output): 11.3%
   - Tilt: 0-degrees (mounted horizontally)
   - Azimuth:180 degrees

BSR/ASHRAE/IES Addendum de
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum de to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

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FOREWORD

This addendum updates rules for modeling dehumidification in Appendix G baseline systems 3 through 8 and 11, 12 and 13 to remove the language that was inadvertently left over since before Appendix G stable baseline was introduced in 90.1 2016 edition.

This addendum impacts an optional performance path in the standard designed to provide increased flexibility and therefore was not subjected to cost effectiveness analysis.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum de to 90.1-2022

Modify Appendix G as follows:

G3.2.3.18 Dehumidification (Systems 3 through 8 and 11, 12, and 13). If the proposed design HVAC systems have humidistatic controls, then the baseline building design shall use mechanical cooling for dehumidification and shall have reheat available to avoid overcooling. When the baseline building design HVAC system does not comply with any of the exceptions in Section 6.5.2.3, then only 25% of the system reheat energy shall be included in the baseline building performance. The reheat type shall be the same as the system heating type.

BSR/ASHRAE/IES Addendum dh
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum dh to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

First Public Review (July 2025)
(Draft Shows Proposed Independent Substantive Changes to Previous Public Review Draft)

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FOREWORD

This proposal modifies the published addendum CW[1] to ASHRAE/IES Standard 90.1-2022. Addendum CW was written in response to code requirements of a minimum of 10 footcandles (fc) in stairways as well as an inadvertent modification of the International Building Code Section 1008.2.1:

> *"Illumination under normal power" which increased the minimum required illumination level 10-fold from 1 fc minimum to 10 fc minimum (the proponents had intended to require 10 fc AVERAGE).*

As a result, Addendum CW to Standard 90.1-2022 created modified the additional lighting power allowance to newly include an additional power for stairways of 1.0 W/ft². For comparison the allowed lighting power density (LPD) for general lighting is stairways is 0.44 W/ft².

This change in illuminance levels has been reversed for the 2027 IBC. Thus these requirements only apply to jurisdictions making use of the 2021 or 2024 IBC or similar standards. The changes proposed here will limit the use of additional lighting power for illuminating the interior exit stairs, only if an illuminance level of 10 footcandles MINIMUM is required by a local code or accreditation standard. Thus if these very high stair illuminance levels are no longer required by the IBC or similar code, the additional lighting power for interior exit stairways will no longer be allowed.

[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the previous draft are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.]

1 https://www.ashrae.org/file%20library/technical%20resources/standards%20and%20guidelines/standards%20addenda/90_1_2022_cw_20230830.pdf

Addendum dh to 90.1-2022

Modify section 9.5.2.2 as follows:

9.5.2.2 Additional Lighting Power

[…]

(d) For interior exit stairways where applicable codes or standards require a minimum illumination level of not less than 10 fc (108 lx) ~~in which lighting is designed for egress and to provide 10 fc (108 lx) minimum~~ at the walking surface when the stairway is in use, additional lighting power shall be allowed per Table 9.5.3.1. This additional allowance does not apply to stairways required to have an average illumination level of 10 fc (108 lx) at the walking surface when the stairway is in use.

BSR/ASHRAE/IES Addendum di
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum di to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

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FOREWORD

This addendum clarifies language in Appendix A related to the location of insulation for foundation walls. It is partially in response to an unofficial interpretation request received by the subcommittee related to this section. Because it is an editorial clarification, a cost-effectiveness analysis was not performed.

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Addendum di to 90.1-2022

Revise text as follows:

A6.2 Rated R-Value of Insulation for Slab-on-Grade Floors

A6.2.1 The *rated R-value of insulation* shall be installed around the perimeter of the *slab-on-grade floor* to the distance specified.

Exception to A6.2.1: For a monolithic *slab-on-grade floor*, the insulation shall extend from the top of the slab-on-*grade* to the bottom of the footing.

A6.2.2 Insulation installed within or on the interior face of ~~inside~~ the foundation *wall* shall extend downward from the top of the slab to not less than ~~a minimum of~~ the distance specified or to the top of the footing, whichever is less.

A6.2.3 Insulation installed on the exterior face of ~~outside~~ the foundation *wall* shall extend continuously from the top of the slab ~~or~~ downward to at least the bottom of the slab and then horizontally to ~~a minimum of the~~ not less than the distance specified. In all climates, the horizontal insulation ~~extending outside of the foundation~~ shall be covered by pavement or by not less than 10 in. (25 cm) of soil ~~a minimum of 10 in. thick~~.

BSR/ASHRAE/IES Addendum dk
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

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FOREWORD

This proposal provides an option for HERVs serving spaces other than non-transient dwelling units to use CAN/CSA C439 energy performance ratings to comply with the requirements of Section 6.5.6.1.2. Just as performance ratings in accordance with AHRI 1060 are permitted for HERVs serving nontransient dwelling units, performance ratings in accordance with CAN/CSA C439 should be permitted for HERVs serving other spaces. HERVs rated in accordance with CAN/CSA C439 are smaller units and are not typically certified to AHRI 1060; in some "other spaces" applications, they may be more practical to use. There is nothing in the scope of either standard that would restrict their use based on the type of space that is served, and reciprocating the recognition of both AHRI 1060 and CAN/CSA C439 for "other spaces" should increase specifier choice, avoid doubling the testing burden for manufacturers certifying to CAN/CSA C439 (as is required for small HERVs by the IECC-R, Canada's Energy Efficiency Regulations, Canada's ENERGY STAR HERV program, etc.), and ultimately reduce costs for consumers. This proposal also updates ASHRAE's reference to CAN/CSA C439 to the 2024 (latest) edition. A free copy of the standard can be accessed through the CSA Communities page (https://community.csagroup.org/login.jspa?referer=%252Findex.jspa, select "Standards View Access," select "View all Energy Efficiency standards," enter "439" in the "Type to filter by text" box, select the 2024 version of the C439 standard from the results).

Cost effectiveness: This change provides an alternate compliance path for exhaust air energy recovery in spaces other than non-transient dwelling units. As the other path has been shown cost effective, it is not necessary to prove this path is cost effective.

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Addendum dk to 90.1-2022

Revise Section 6.5.6.1 as shown below. (I-P and SI)

6.5.6.1 Exhaust Air to Outdoor Air Energy Recovery. *Nontransient dwelling units* shall comply with Section 6.5.6.1.1. All other spaces shall comply with Section 6.5.6.1.2.

6.5.6.1.1 Nontransient Dwelling Units. *Nontransient dwelling units* shall have a *ventilation system*-with *energy* recovery to transfer *energy* between the *system* exhaust air and *outdoor air* at not less than the *design minimum outdoor air rate* and comply with one of the following:

a. The exhaust air energy recovery performance of the heat exchanger shall be determined in accordance with AHRI 1060 [AHRI 1061], ~~and at the heating *design condition*,~~ the heat exchanger shall comply with the following:

1. In Climate Zones 0 through 3 at the cooling design condition, the *enthalpy recovery ratio* at the *design minimum outdoor air rate* shall be not less than 50%.
2. In Climate Zones 3 through 8, where active humidification is provided to spaces served by the system, the heat exchanger's enthalpy recovery ratio at the heating design condition at the *design minimum outdoor air rate* shall be not less than 60%.
3. In Climate Zones 3 through 8, when active humidification is not provided to *spaces* served by the *system*, the heat exchanger's *sensible energy recovery ratio* at the heating *design condition* at the *design minimum outdoor air rate* shall be not less than 60%.

b. The *equipment*'s energy recovery performance shall be determined in accordance with CAN/CSA C439 and shall comply with the following:

1. In Climate Zones 4 through 8, the *equipment's* sensible recovery efficiency rating at the 32°F (0°C) outdoor air heating mode test condition shall not be less than 65%.
2. In Climate Zones 0A, 1A, 2A, and 3A, the *equipment's* total recovery efficiency rating at the 95°F (35°C) outdoor air cooling mode test condition shall not be less than 50%.
3. In Climate Zones other than 0A, 1A, 2A, and 3A, where active humidification is provided to spaces served by the system, the *equipment's* net moisture transfer ratio rating at the 32°F (0°C) outdoor air heating mode test condition shall not be less than 0.40.
4. The *equipment's* sensible recovery *efficiency* and net moisture transfer shall be determined from a rated value, or interpolation of rated values, at an airflow rate not less than the *design minimum outdoor air rate*.

Exceptions to 6.5.6.1.1:

1. *Nontransient dwelling units* in Climate Zone 3C.
2. *Nontransient dwelling units* with not more than 500 ft^2 of *gross conditioned floor area* in Climate Zones 0, 1, 2, 3, 4C, and 5C.

6.5.6.1.2 Other Spaces. Each fan *system* serving other *spaces* shall have an *energy* recovery *system* where the design supply fan airflow rate exceeds the value listed in Tables 6.5.6.1.2-1 and 6.5.6.1.2-2, based on the climate zone and percentage of *design minimum outdoor air rate* at design airflow conditions. Table 6.5.6.1.2-1 shall be used for all *ventilation systems* that operate less than 8000 hours per year, and Table 6.5.6.1.2-2 shall be used for all *ventilation systems* that operate 8000 or more hours per year.

Exceptions to 6.5.6.1.2:

1. Laboratory *systems* meeting Section 6.5.7.3.
2. *Systems* serving *spaces* that are not cooled and that are heated to less than 60°F (16°C).
3. Heating *energy* recovery where more than 60% of the *outdoor air* heating *energy* is provided from *site recovered energy* or *on-site renewable energy* in Climate Zones 5 through 8.

~~*4. Enthalpy recovery ratio* requirements at heating design condition in Climate Zones 0, 1, and 2.~~

~~*5. Enthalpy recovery ratio* requirements at cooling design condition in Climate Zones 3C, 4C, 5B, 5C, 6B, 7, and 8.~~

~~6~~4. Where the sum of the airflow rates exhausted and relieved within 20 ft (6 m) of each other is less than 75% of the *design minimum outdoor air rate*, excluding exhaust air that is

a. used for another *energy* recovery *system*,
b. not allowed by ASHRAE/ASHE Standard 170 for use in *energy* recovery *systems* with leakage potential, or
c. of Class 4 as defined in ASHRAE Standard 62.1.

~~7~~5. *Systems* in Climate Zones 0 through 4 requiring dehumidification that employ *series energy recovery* and have a minimum *SERR* of 0.40 at 75.0°F (23.9°C) dry-bulb, 63.0°F (17.2°C) wet-bulb entering air condition, and at the design airflow.

~~8.~~ 6. *Systems* expected to operate less than 20 hours per week at the *design minimum outdoor air rate* percentage covered by Table 6.5.6.1.2-1.

~~9.~~ 7. *Indoor pool dehumidifiers* meeting Section 6.5.6.4.

6.5.6.1.2.1 Energy Recovery Performance. The exhaust air energy recovery performance ~~of the heat exchanger~~ shall be determined in accordance with one of the following:

a. The exhaust air energy recovery performance of the heat exchanger shall be determined in accordance with AHRI 1060 [AHRI 1061] and shall comply with the following: ~~:~~

1. In Climate Zones 0A, 0B, 1A, 1B, 2A, 2B 3A, 3B, 4A, 4B, 5A, and 6A, ~~A~~at the cooling *design condition*, the *enthalpy recovery ratio* at the *design minimum outdoor air rate* shall be not less than 50% ~~and at the heating *design condition*, the heat exchanger shall comply with the following:~~.

2. In Climate Zones 3 through 8, at the heating *design condition*:

a. Where active humidification is provided to *spaces* served by the *system*, the heat exchanger's *enthalpy recovery ratio* at the *design minimum outdoor air rate* shall be not less than 50%.

b. Where active humidification is not provided to *spaces* served by the *system*, the heat exchanger's *sensible energy recovery ratio* at the *design minimum outdoor air rate* shall be not less than 50%.

~~The *energy* recovery *system* shall provide the required *enthalpy recovery ratio* or *sensible energy recovery ratio* at both heating and cooling *design conditions* unless one mode is not required for the climate zone by the exceptions to Section 6.5.6.1.2.~~

b. The *equipment*'s energy recovery performance shall be determined in accordance with CAN/CSA C439 and shall comply with the following:

1. The *equipment*'s sensible recovery efficiency rating at the 32°F (0°C) outdoor air heating mode test condition shall not be less than 65%. This requirement shall not apply in Climate Zones 0 through 2.

2. The *equipment*'s total recovery efficiency rating at the 95°F (35°C) outdoor air cooling mode test condition shall not be less than 50%. This requirement shall not apply in Climate Zones 3C, 4C, 5B, 5C, 6B, 7, and 8.

3. Where active humidification is provided to spaces served by the system, the *equipment*'s net moisture transfer ratio rating at the 32°F (0°C) outdoor air heating mode test condition shall not be less than 0.40. This requirement shall not apply in Climate Zones 0 through 2.

4. The *equipment*'s sensible recovery efficiency and net moisture transfer shall be determined from a rated value, or interpolation of rated values, at an airflow rate not less than the *design minimum outdoor air rate*.

…

Revise Section 11.5.2.2.6 as shown below. (I-P and SI)

11.5.2.2.6 H06: Dedicated Outdoor Air System with Zone Fan Control. Credits for this measure are only allowed where single-zone HVAC units are not required to have multispeed or variable-speed fans in accordance with Section 6.5.3.2.1. HVAC controls and *ventilation systems* shall include all of the following:

a. Zone controls shall cycle the heating/cooling-unit fans off when not providing required heating and cooling or shall limit fan power to 0.12 W/cfm of air delivered to the zone by the unit.

b. *Outdoor air* shall be supplied by an independent *ventilation system* designed to provide no more than 110% of the minimum *outdoor air* to each individual occupied space as specified by Standard 62.1.

c. The *ventilation system* shall have exhaust air *energy* recovery complying with Item 1 or Item 2, or any combination thereof. Where *energy* recovery effectiveness is less than the value required for full credit, adjust the credits from Section 11.5.3 by the factors in Table 11.5.2.2.6.

1. The heat exchanger's exhaust air energy recovery performance shall be determined in accordance with AHRI 1060 [AHRI 1061] and shall have ~~with~~ an *enthalpy recovery ratio* (*ERR*) of 65% or more at heating *design conditions* in Climate Zones 3 through 8 and an *ERR* of 65 percent or more at cooling design conditions in Climate Zones 0, 1, 2, 3A, 3B, 4A, 4B, 5A and 6A. In "A" climate zones, *energy* recovery shall include latent recovery. Where no humidification is provided, heating *energy* recovery effectiveness is permitted to be based on *sensible energy recovery ratio*.

2. The equipment's exhaust air *energy recovery* performance shall be determined in accordance with CAN/CSA C439 and shall comply with the following:

a. In Climate Zones 4 through 8, the *equipment's* sensible recovery efficiency rating at the 32°F (0°C) outdoor air heating mode test condition shall not be less than 75%.

b. In Climate Zones 0A, 1A, 2A, and 3A, the *equipment's* total recovery efficiency rating at the 95°F (35°C) outdoor air cooling mode test condition shall not be less than 60%.

c. In Climate Zones other than 0A, 1A, 2A, and 3A, where active humidification is provided to spaces served by the system, the *equipment's* net moisture transfer ratio rating at the 32°F (0°C) outdoor air heating mode test condition shall not be less than 0.50.

d. The *equipment's* sensible recovery efficiency and net moisture transfer shall be determined from a rated value, or interpolation of rated values, at an airflow rate not less than the *design minimum outdoor air rate*.

~~Where *energy* recovery effectiveness is less than the 65% require for full credit, adjust the credits from Section 11.5.3 by the factors in Table 11.5.2.2.6.~~

…

Table 11.5.2.2.6 DOAS ENERGY RECOVERY ADJUSTMENTS

EREadj BASED ON LOWER OF ACTUAL HEATING OR COOLING ENERGY ~~RECOVERY EFFECTIVENESS~~ PERFORMANCE WHERE REQUIRED					
Performance Determined by AHRI 1060 [AHRI 1061]		Performance Determined by CAN/CSA C439			
Cooling *ERR* Is ≥	Heating ~~Enthalpy Recovery Ratio (*ERR*)~~ or Sensible Energy Recovery Ratio Is ≥	Total Recovery Efficiency at 95°F (35°C) Is ≥	Sensible Recovery Efficiency at 32°F (0°C) Is ≥	Net Moisture Transfer Ratio at 32°F (0°C) Is ≥	Energy Recovery Effectiveness Adjustment (*EREadj*)
65%	65%	60%	75%	0.50	1.00
60%	60%	57%	72%	0.47	0.67
55%	55%[a]	53%	68%	0.43	0.33
50%	50%[a]	50%	65%	0.40	0.25

a. In climate zones where heating recovery is required for this measure, for multifamily buildings heating energy recovery effectiveness below 60% is not allowed.

Revise Section 13 as shown below. (I-P)

Reference	Section
Air Conditioning, Heating and Refrigeration Institute (AHRI) □ **2311 Wilson Blvd., Arlington, VA 22201**	
AHRI 1060 (I-P/~~2018~~ 2023) Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment	6.5.6.1.1.a, 6.5.6.1.2.1
CSA Group □ **178 Rexdale Blvd., Toronto, ON, Canada M9W 1R3**	
CSA C439-~~2018~~ 2024 Laboratory Methods of Test for Rating the Performance of Heat/Energy-Recovery Ventilators	6.5.6.1.1.b

Revise Section 13 as shown below. (SI)

Reference	Section
Air Conditioning, Heating and Refrigeration Institute (AHRI) □ **2311 Wilson Blvd., Arlington, VA 22201**	
AHRI 1061 (SI/~~2018~~ 2023) Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment	6.5.6.1.1.a 6.5.6.1.2.1
CSA Group □ **178 Rexdale Blvd., Toronto, ON, Canada M9W 1R3**	
CSA C439-~~2018~~2024 Laboratory Methods of Test for Rating the Performance of Heat/Energy-Recovery Ventilators	6.5.6.1.1.b

BSR/ASHRAE/IES Addendum dl
to ANSI/ASHRAE/IES Standard 90.1-2022

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FOREWORD

Gas-fired heat pumps for space heating are an emerging technology that can reduce natural gas or propane consumption for users who choose this technology. This equipment can achieve a coefficient of performance (COP) greater than 100 percent, even in cold temperatures, which exceeds even the most efficient boilers. The existing language in the standard does not recognize gas-fired heat pumps in either Section 6.5.4.8, which requires higher than minimum efficiencies for large capacity systems, or the energy credits in Section 11.5.2.2 – "Improved HVAC Performance."

This proposal:

- adds CSA/ANSI Z21.40.4-CSA 2.94 as a testing method for gas-fired heat pumps, with the rating point at 17ºF.
- inserts text into Section 6.5.4.8 that allows the use of gas-fired heat pumps to meet the requirements of that section.
- Expands Section 11.5.2.2 – "Improved HVAC Performance" to allow the use of gas-fired heat pumps and increases the maximum heating improvement from 20 percent to 30 percent.

Cost-effectiveness: This addendum provides an additional path to meet high-efficiency gas heating requirements, and does not increase the cost of construction unless users select gas-fired heat pumps.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum dl to 90.1-2022

Make the following changes to Section 6.4.7

6.4.7 Performance Rating Requirements for Equipment Without Minimum Efficiency Requirements ~~System Components~~. The *equipment* listed in Table 6.4.7 shall be rated in accordance with the rating procedure listed.

Table 6.4.7 Performance Rating Procedures for Equipment Without Minimum Efficiency Requirements ~~System Components~~

Equipment	Rating Procedure
Plate-type liquid-to-liquid heat exchangers	AHRI 400
Fin-and-tube heating and cooling coils (hydronic and DX)	AHRI 410
Exhaust air energy recovery heat exchangers	AHRI 1060
Gas-fired heat pumps	The rated COP at 17ºF [-8.3°C] outdoor air temperature when tested and rated in accordance with CSA/ANSI Z21.40.4-CSA 2.94

Modify Section 6.5.4.8 (I-P and SI) as follows:

6.5.4.8 Buildings with High-Capacity Space-Heating Gas Boiler or Gas-fired Hydronic Heat Pump Systems. New *buildings* with gas hot-water *boiler systems* or gas-fired heat pump hydronic systems, or a combination thereof, for *space* heating with a total *system* input of ~~at least~~ not less than 1,000,000 Btu/h [290 kW] but not more than 10,000,000 Btu/h [2900 kW] shall comply with Sections 6.5.4.8.1 and 6.5.4.8.2. Individual gas boilers with input capacity less than 300,000 Btu/h [87 kW] shall not be included in the calculations of the total system input or total system efficiency.

Exceptions to 6.5.4.8:

1. Where 25% of the annual *space* heating requirement is provided by *on-site renewable energy*, *site-recovered energy*, or heat recovery chillers.
2. *Space heating boilers* or gas-fired hydronic heat pumps installed in individual *dwelling units*.
3. Where 50% or more of the design heating load is served using perimeter convective heating, radiant ceiling panels, or both.
4. ~~Individual gas boilers with input capacity less than 300,000 Btu/h [87 kW] shall not be included in the calculations of the total system input or total system efficiency.~~

6.5.4.8.1 Boiler and Gas-fired Hydronic Heat Pump Efficiency. Systems with a single ~~G~~gas hot-water boiler or gas-fired hydronic heat pump shall have a minimum thermal efficiency (E_t) of 90% when rated in accordance ~~with the test procedures in Table 6.8.1-6.~~ with the following:

1. *Boilers* shall be rated in accordance with the test procedures in Table 6.8.1-6
2. Gas-fired hydronic heat pumps shall be rated in accordance with Section 6.4.7, and the rated COP, expressed as a percent, shall be the E_t of that equipment.

Systems with multiple boilers, gas-fired hydronic heat pumps, or combinations thereof, are allowed to meet this requirement if the space heating input provided by equipment with thermal efficiency (E_t) above and below 90% provides an input capacity-weighted average thermal efficiency of at least 90%. For boilers rated only for combustion efficiency, the calculation for the input capacity-weighted average thermal efficiency shall use the combustion efficiency value.

Modify Section 11.5.2.2 (I-P and SI) as follows:

11.5.2.2 Improved HVAC Performance. To achieve these credits, *equipment* shall provide HVAC performance improvement in accordance with Section 11.5.2.2.2, 11.5.2.2.3, 11.5.2.2.4, 11.5.2.2.5, or 11.5.2.2.6. *Equipment* shall also meet applicable requirements of Sections 6.4 and 6.5. Credits shall be as shown in Section 11.5.3 or as specified in each subsection for *building* use types where base credits are included in Section 11.5.3 tables. Use of multiple credits from this section shall be allowed.

- **H01: HVAC System Performance Improvement** (Reserved)
- **H02: HVAC Heating Performance Improvement.** To achieve this credit, *space* heating *equipment* shall exceed the minimum heating *efficiency* requirements by 5% or more than listed in the tables in Section 6.8.1. The measure *energy* credit for heating *efficiency* improvement (EC_{HE}) shall be determined as follows:

$$EC_{H02\_adj} = EC_{H02\_base} \; x \; \frac{EI_{heat}}{0.05}$$

where

EC_{H02_adj} = *energy* credits achieved for heating *efficiency* improvement

EC_{H02_base} = H02 base *energy* credit from Section 11.5.3

EI_{heat} = ~~lesser of~~ the percentage improvement (as a fraction) above minimum *efficiency* requirements or ~~20% (0.20)~~30% (0.30). Where heating *equipment* with different minimum efficiencies are included in the *building*, a heating capacity weighted-average improvement shall be used. Where *electric resistance* primary heating or *reheat* is included in the *building*, it shall be included in the weighted-average improvement with an EI_{heat} of 0. Supplemental gas and electric heat for heat-pump *systems* shall be excluded from the weighted EI_{heat}. ~~For heat pumps rated at multiple ambient temperatures, use the *efficiency* at 47ºF.~~

~~Gas-fired *boiler systems* that are required to meet provisions of Section 6.5.4.8 shall use the minimum *system efficiency* (HM_{min}) as defined in Section 6.5.4.8.1. Gas-fired *boiler systems* that are required to meet provisions of Section 6.5.4.8 shall use the minimum *system efficiency* as defined in Section 6.5.4.8.1.~~

For metrics that increase as *efficiency* increases, EI_{heat} shall be calculated as follows:

$$EI_{Heat} = \frac{HM_{des}}{HM_{min}} - 1$$

Where:

HM_{des} = design heating *efficiency* metric, part-load or annualized, where available. For electric heat pumps rated at multiple ambient temperatures, use the *efficiency* at 47ºF[8.3°C]. Gas-fired hydronic heat pumps shall be rated in accordance with Section 6.4.7.

HM_{min} = minimum required heating *efficiency* metric, part-load or annualized ~~where available from~~ in Section 6.8.1 for equipment other than gas-fired heat pumps. HM_{min} for gas-fired heat pumps shall be the same as for a boiler or furnace of the same input rating. For electric heat pumps rated at multiple ambient temperatures, use the *efficiency* at 47ºF[8.3°C]. Where gas-fired *boiler systems* or gas-fired hydronic heat pump systems are required to meet provisions of Section 6.5.4.8, the minimum *system efficiency* HM_{min} shall be the minimum E_t required in Section 6.5.4.8. ~~or Informative Appendix F~~

Informative Note: An example of an annualized or part-load heating efficiency is AFUE rather than E_t or E_c. Where only one efficiency rating is provided for equipment in Section 6.8.1 ~~or Informative Appendix F~~, use that metric.

Add to Section 13 (I-P or SI):

Canadian Standards Association (CSA)
78 Rexdale Blvd., Toronto, On, Canada M9W 1R3

CSA/ANSI Z21.40.4 - CSA 2.94.- Performance Testing and Rating of Gas-Fired, Air Conditioning and Heat Pump Appliances 2023

BSR/ASHRAE/IES Addendum dm
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

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FOREWORD

Gas-fired heat pumps for water heating are an emerging technology that can reduce natural gas or propane consumption for users who choose this technology. This equipment can achieve a coefficient of performance (COP) greater than 100 percent, even in cold temperatures, which exceeds even the most efficient service water heating boilers. The existing language in the standard does not recognize gas-fired heat pumps in either Section 7.5.3 – "Large Gas-fired Service Water-Heating Systems," which requires higher than minimum efficiencies for large capacity systems, or the energy credits in Section 11.5.2.3.1 Improved Service Water Heating Effectiveness."

This proposal:

- adds ANSI/ASHRAE 118.1-2022 and ANSI/ASHRAE 118.2-2022 as testing methods for gas-fired heat pump water heaters, with the rating point at 50ºF.
- inserts text into Section 7.5.3 that allows the use of gas-fired heat pumps to meet the requirements of that section.
- expands Section 11.5.2.3.1 Improved Service Water Heating Effectiveness" to allow the use of gas-fired heat pump water heaters and provides a path for additional credits for equipment that exceeds the 95 E_t threshold.

Cost-effectiveness: This addendum provides an additional path to meet high-efficiency gas service water heating requirements, and does not increase the cost of construction unless users select gas-fired heat pump water heaters.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum dm to 90.1-2022

Add a new definition to Section 3.2

high-capacity gas-fired service water-heating equipment: gas-fired instantaneous water heaters with a rated input both greater than 200,000 Btu/h [56.8 kW] and not less than 4000 Btu/h per gallon [310 W per litre] of stored water, and gas-fired storage water heaters with a rated input both greater than 105,000 Btu/h [30.8 kW] and less than 4000 Btu/h per gallon [310 W per litre] of stored water, and gas-fired heat pump water heaters with an input capacity greater than 50,000 Btu/h [14.2 kW].

Add Section 7.4.4 to Section 7.4 (I-P and SI) as follows:

7.4.7 Performance rating of gas heat pump water heaters. The COP of gas-fired heat pump water heaters with an input capacity greater than 20,000 Btu/h [21.1 MJ/h] shall be rated at 50ºF [10°C] ambient air temperature in accordance with ASHRAE Standard 118.1. The COP of gas-fired heat pump water heaters with an input capacity of not more than 20,000 Btu/h [21.1 MJ/h] shall be rated at 67.5ºF [19.7°C] ambient air temperature in accordance with ANSI/ASHRAE 118.2.

7.5.3 Large Gas-fired Service Water-Heating Systems. New buildings with service water-heating systems with a total installed input capacity of 1,000,000 Btu/h [293 kW] or greater, provided by *high-capacity gas-fired service water-heating equipment* not installed in individual dwelling units, shall meet ~~either or both~~ the following requirements:

a. Where a single unit of *high-capacity gas-fired service water-heating equipment* is installed, it shall have a minimum thermal efficiency (E_t) of 92%.
b. Multiple units of *high-capacity gas-fired service water-heating equipment* connected to the same service water-heating system shall have a total input capacity-weighted average thermal efficiency (E_t) of ~~at least~~ not less than 90%, and a minimum of 30% of the input of the *high-capacity gas-fired service water-heating equipment* in the service water heating system shall have a thermal efficiency (E_t) of ~~at least~~ not less than 92%.
c. Where gas-fired heat pump water heaters are used, they shall be rated in accordance with Section 7.4.7 and, for the purpose of this section, E_t shall be the rated COP expressed in percent.

~~High-capacity gas-fired service water-heating equipment comprises gas-fired instantaneous water heaters with a rated input both greater than 200,000 Btu/h and not less than 4000 Btu/h per gallon of stored water, and gas-fired storage water heaters with a rated input both greater than 105,000 Btu/h and less than 4000 Btu/h per gallon of stored water.~~

~~**Exceptions to 7.5.3:**~~
~~1. Water heaters installed in individual dwelling units.~~
~~2. Individual gas water heaters with input capacity not greater than 100,000 Btu/h.~~

11.5.2.3.1 Improved Service Water Heating Effectiveness. Service water heating effectiveness energy credits are permitted to be achieved in building use types where credits are available in Section 11.5.3 for one of the following:

…

b. **W02: Electric Heat-Pump Water Heater**. To achieve this credit, electric air source heat-pump water heaters shall be installed according to the manufacturer's instructions, and at least 30% of design end-use service water heating requirements shall be met using only heat-pump heating at an ambient condition of 67.5°F [19.7°C] db without supplemental electric resistance or fossil fuel heating. For a hybrid heat-pump water heater, the heat-pump-only capacity shall be deemed at 40% of the first hour draw. Where the heat-pump-only capacity exceeds 50% of the design end-use load, excluding recirculating system losses, the credits from the Section 11.5.3 tables shall be prorated as follows:

ECW02_calc where = ECW02_base × CapHPWH/EndLoad x 0.5 (not greater than 2)
Where:
ECW02_calc = energy credits achieved for heat-pump water heater
ECW02_base = W02 base energy credit from Section 11.5.3
CapHPWH = heat-pump-only capacity at 50°F [10°C] entering air and 70°F [21°C] without supplemental electric resistance or fossil fuel heat, Btu/h
EndLoad = end-use peak hot-water load, excluding load for heat trace or recirculation, Btu/h

The heat-pump service water heating system shall comply with the following requirements:

1. For central systems with an installed total output capacity of more than 100,000 Btu/h at an ambient condition of 67.5°F [19.7°C] db, a preheat storage tank with ≥0.75 gal per 1000 Btu/h [9.7 L/kW] of design end-use ser vice water heating requirements shall be heated only with heat-pump heating when the ambient temperature is ~~>~~more than 45°F [7.2°C].
2. For systems with piping temperature maintenance, either a heat trace system or a separate water heater in series for recirculating system and final heating shall be installed.
3. Heat-pump water heater efficiency shall meet or exceed one of the following:
   i. Output-capacity-weighted-average uniform energy factor (UEF) of 3.0 with a medium draw pattern in accordance with 10 CFR 430 Appendix E.
   ii. Output-capacity-weighted-average COP of not less than 4.0 tested at 50°F [10°C] entering air and 70.0°F [21.1°C] entering water in accordance with Standard 1300.

   Informative Note: Service water heating system control settings and operating temperatures should be determined in accordance with the ASHRAE Standard 188 building water systems water management program for the building or with generally accepted engineering standards and guidance (e.g., ASHRAE Guideline 12).

c. **W03: Efficient Gas Water Heater**. To achieve this credit, the combined input-capacity-weighted-average equipment rating of all gas water heating equipment in the building shall be not less than 95% E_t or 0.93 UEF. Gas-fired heat pump water heaters shall be rated in accordance with Section 7.4.7. For the purpose of this section, the E_t of gas-fired heat pump water heaters with an input capacity of more than 20,000 Btu/h [5.68 kW] shall be the rated COP expressed in percent.

Buildings required to comply with Section 7.5.3 shall receive 29.6% of the Section 11.5.3 W03 credit. Buildings where the installed service water heating capacity is less than 200,000 Btu/h [56.8 kW] and weighted UEF is not less than 0.82 shall achieve 25% of the base table W03 credit.

For gas-fired water heating equipment that exceeds 95% Et or .93 UEF, credits shall be adjusted according to the following equation:

$$ECW03_{adj} = ECW03_{base} \times Et_{des}/Et_{min}$$

Where:
$ECW03_{adj}$ = adjusted energy credits
$ECW03_{base}$ = base energy credits from Tables 11.5.3-1 through 11.5.3-9
Et_{des} = rated efficiency of proposed water heating equipment
Et_{min} = 95% E_t or 0.93 UEF as applicable to the gas-fired service water heating equipment

d. Combination service water heating systems shall achieve credits as follows:
   1. (W01 + W02) Where service water heating employs both energy recovery and heat-pump water heating, W01 is permitted to be combined with W02 and receive the sum of both credits.
   2. (W01 + W03) Where service water heating employs both energy recovery and efficient gas water heating, W01 is permitted to be combined with W03 and receive the sum of the W01 credit and the portion of the W03 credit based on item (4).
   3. (W02 + W03) Where service water heating employs both heat-pump water heating and efficient gas water heating, W02 is permitted to be combined with W03 and receive the sum of the W02 credit and the portion of the W03 credit based on item (4).
   4. For items (2) and (3), the portion of W03 credit shall be the Section 11.5.3 W03 credit multiplied by the share of total water heating installed capacity served by gas water heating with not less than 95% Et or 0.93 UEF. In no case shall it exceed 60% of the W03 credit in Section 11.5.3. In buildings that have a service water heating design generating capacity greater than 900,000 Btu/h, that proportioned W03 credit shall be further multiplied by 29.6%.

Add to Section 13 (I-P and SI) as follows:

ASHRAE

ANSI/ASHRAE 118.1-2022	Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water-Heating Equipment
ANSI/ASHRAE 118.2-2022	Method of Testing for Rating Residential Water Heaters and Residential-Duty Commercial Water Heaters

BSR/ASHRAE/IES Addendum dn
to ANSI/ASHRAE/IES Standard 90.1-2022

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FOREWORD

ASHRAE Guideline 12 and other codes and accreditation standards require service water heating storage temperatures of 140ºF and higher to prevent microbial growth. Section 7.4.4.1 requires storage water heaters to be capable of thermostatic settings that allow storing water at temperatures of 120ºF or lower. Although this requirement does not conflict with Guideline 12 or the other standards, it has caused concern in at least one jurisdiction that requires service water heating storage at higher temperatures. Further, some new technologies require production and storage at higher temperatures. Finally, existing safety standards require thermostatic controls for storage water heaters. Therefore, there is no longer a need for the requirement, and it should be deleted.

Cost-effectiveness: This measure does not change the cost of construction or reduce energy efficiency.

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Addendum dn to 90.1-2022

Delete Section 7.4.4.1 (I-P and SI) as follows:

7.4.4 Service Water-Heating System Controls
Informative Note: *Service water heating system* control settings and operating temperatures should be determined in accordance with the ASHRAE Standard 188 *building* water *systems* water management program for the *building*, or with *generally accepted engineering standards* and guidance (e.g., ASHRAE Guideline 12).

~~**7.4.4.1 Temperature Controls.** Temperature controls shall be provided that allow for storage temperature adjustment from 120°F or lower to a maximum temperature compatible with the intended use.~~

~~**Exception to 7.4.4.1:** When the *manufacturers*' installation instructions specify a higher minimum *thermostat* setting to minimize condensation and resulting corrosion.~~

7.4.4.1~~2~~ Temperature Maintenance Controls. *Systems* designed to maintain usage temperatures in hot water pipes, such as recirculating hot-water *systems* or *heat trace*, shall be equipped with *automatic* time switches or other controls that can be set to switch off the usage temperature maintenance *system* during extended periods when hot water is not required.

7.4.4.2~~3~~ Outlet Temperature Controls. Temperature controlling means shall be provided to limit the maximum temperature of water delivered from lavatory faucets in *public facility restrooms* to 110°F [49°C].

7.4.4.3~~3~~Circulating Pump Controls. When used to maintain storage tank water temperature, recirculating *pumps* shall be equipped with controls limiting operation to a period from the start of the heating cycle to a maximum of five minutes after the end of the heating cycle.

BSR/ASHRAE/IES Addendum do
to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum do to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

First Public Review (July 2025)
(Draft Shows Proposed Changes to Current Standard)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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FOREWORD

ASHRAE Standard 90.4 recently requested an additional edit to align changes in the 90.1 normative reference. This addendum completes the requested update.

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Addendum do to 90.1-2022

Modify Section 13 Normative References as shown below (IP and SI).

[. . .]

ANSI/ASHRAE/IES Standard 90.4-~~2019~~ 2022 ~~(with addenda a, b, d, e, and f)~~ (with addenda a, b, c, and g)	Energy Standard for Data Centers	6.6.1, 6.6.2.1, 8.6. Table 11.5.1-1, 11.5.2.2.3

[. . .]

BSR/ASHRAE/IES Addendum dp
to ANSI/ASHRAE/IES Standard 90.1-2022

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FOREWORD

SSPC 300, which is the ASHRAE Standards Committee for commissioning, has been working with SSPC 90.1 in revising the Section 4 requirements for commissioning and has proposed the following modifications noted in this addendum.

Commissioning (Cx) is included as a generic requirement in the technical Sections 4-10 of Standard 90.1-2022. The current language is too broad. Therefore, it is often inconsistently applied across jurisdictions by AHJs and causes many issues and misunderstandings with Cx Providers.

There is no cost add, because the process is already defined in Section 4 and in Appendix H. The proposed language change is intended to clarify the process in Section 4.

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Addendum dp to 90.1-2022

Modify Section 4 as shown below (IP and SI).

[. . .]

4.2.5.1.2 FPT and Verification Documentation. The completed verification and *FPT* documentation shall include the results of the *FPT* and verification, be provided to the owner, and be retained with the proj- ect records. The *V&T providers* shall certify completion of required verification and *FPT* and include a plan for the completion of any deferred *FPT*, including climatic and other conditions required for performance of the deferred tests. The final report shall document that all required *systems* and controls are installed, configured, calibrated, and tested in accordance with the applicable requirements. A copy of verification and *FPT* documentation shall be submitted to the ~~*building official*~~ *AHJ* if requested.

[. . .]

4.2.5.2 Project Commissioning Documents. Project *commissioning* documents shall comply with ASHRAE/IES Standard 202 or other *generally accepted engineering standards* acceptable to the ~~*building official*~~*AHJ*. The *commissioning provider* shall certify completion of the required *commissioning process* and provide the following documents to the owner and design teams:

a. **Commissioning Plan.** The *commissioning* plan shall include: ~~Identify *FPT* or verification procedures for all *systems* to be verified, commissioned, or tested.~~
   1. A list of the *systems* to be commissioned and the applicable performance requirements according to the Owner's Project Requirements.

2. Planned activities for *commissioning* process.
3. Project team's roles and responsibilities.
4. *FPT* or verification procedures for all *systems* to be verified, commissioned, or tested.
5. Issues and resolution log.
6. Training plan.

b. **Design Review Report.** The design review report shall detail compliance of the design with the Owner's Project Requirements ~~and provisions of this standard~~. This *commissioning* design review shall not be considered a design peer review or a code or regulatory review.

c. **Preliminary Commissioning Report.** The preliminary *commissioning* report shall include the following:

1. Required performance of commissioned *equipment*, *systems*, and assemblies, and results of *FPT* and verification
2. Summary of compliance of the *building* and its components, assemblies, controls, and *systems* with required provisions of this standard
3. Issues and resolution logs, including itemization of deficiencies found during verification, testing, and *commissioning* that have not been corrected at the time of report preparation
4. Deferred tests that cannot be performed at the time of report preparation
5. Documentation of the training of operating personnel and building occupants on commissioned systems, and a plan for the completion of any deferred trainings not completed at the time of report preparation
6. A plan for the completion of commissioning and training, including climatic and other conditions required for performance of the deferred tests

[. . .]

Draft PDS-03 New Standard:

RESNET/ICC 1580: CO_2e Emissions Based on Metered Data, for Operational Ratings

3. Definitions:

Carbon emission~~:~~ – Emission of carbon dioxide and other greenhouse gases, based on equivalent warming effect to CO_2.[1]

~~NOTE: Energy policy discussions, particularly those focused on net zero energy or carbon, almost always use the word "carbon" as a shorthand for "greenhouse gas".~~

On-Site Power Production (OPP) – Electric power produced on the site of a facility. OPP shall be the net electrical power production, such that it equals the gross electrical power production minus any purchased fossil fuel energy used to produce the on-site power, converted to equivalent electric energy use at a 40% conversion efficiency.

Real Social Discount Rate (SDR) – Rate at which CO_2e emission rates are discounted over time. The SDR does not include the time value of money that is included in nominal discount rates used in financial assessments, which include the general inflation rate such that the nominal rate equals (1 + real rate) times (1 + inflation rate) – 1.

4. Methods:

~~**[Normative Text:]**~~

4.1. Emissions. The emissions for the facility or organization shall be calculated in accordance with Sections 4.1.1 and 4.1.2.

~~**4.1.1. Emissions**. Emissions for all facilities or organizations shall be calculated in accordance with Sections 4.1.1.1 and 4.1.1.2.~~

4.1.1.~~**1.**~~ For electricity use, metered consumption data shall be collected on an hourly or shorter (e.g., 15-minute) basis. Data for the sub-region annual total output emission rates published by Environmental Protection Agency's 2020 eGRID database[2] for

[1] (Informative Note): Energy policy discussions, particularly those focused on net zero energy or carbon, almost always use the word "carbon" as a shorthand for "greenhouse gas".

[2] (Informative Reference) http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html

electricity generation shall be used to calculate emissions[3] except CO_2e emissions, which shall be calculated using the provisions of Section 4.2 to calculate the annual hourly CO_2e emissions.

4.1.2.~~1.1.~~ For imported renewable electricity or on-site generated renewables, power shall be metered, calculated or simulated on an hourly or shorter basis.

4.1.1.1.~~2~~ For on-site battery storage systems, the provisions of ANSI/RESNET/ICC 301 shall apply.

4.1.3.~~1.2.~~ For fossil fuel use, consumption of each fuel shall be derived from metered consumption or invoiced fuel deliveries on an annual basis, and emissions shall be calculated using the annual average emission factors given in Table 4.1.1(1).

Table 4.1.3~~1~~(1) Emission Factors for ~~Household~~ Combustion Fuels[4]

Fuel Type	Units	MBtu per Unit	CO_2e lb/MBtu	NOx lb/MBtu	SO_2 lb/MBtu
Natural Gas	Therm	0.1000	147.3	0.0922	0.0006
~~Fuel Oil #2~~	~~Gallon~~	~~0.1385~~	~~195.9~~	~~0.1300~~	~~0.0015~~
Liquid Petroleum Gas (LPG)	Gallon	0.0915	177.8	0.1421	0.0002
Residual Fuel Oil	Gallon	0.150	202.5	0.3667	0.0012
Distillate Fuel Oil	Gallon	0.140	196.0	0.1429	0.0013
Coal	ton	24.6	227.8	0.1220	0.1427
Gasoline	MBtu	1	201.7	1.6300	0.0840
~~Fuel Type~~	~~Units~~	~~MBtu per Unit~~	~~CO_2e lb/MBtu~~	~~NOx lb/MBtu~~	~~SO_2 lb/MBtu~~
~~Natural Gas~~	~~Therm~~	~~0.1000~~	~~147.3~~	~~0.0922~~	~~0.0006~~
~~Fuel Oil #2~~	~~Gallon~~	~~0.1385~~	~~195.9~~	~~0.1300~~	~~0.0015~~
~~Liquid Petroleum Gas (LPG)~~	~~Gallon~~	~~0.0915~~	~~177.8~~	~~0.1421~~	~~0.0002~~

~~**Table 4.1.1 (2) Emission factors for commercial and industrial facilities**~~

[3] (Informative Note) RESNET will compile and publish annual total output emission rate data for NOx, SO_2 and CO_{2e} in accordance with the provisions of this section that can be used by Approved Software Rating Tools for the calculation of emissions.

[4] (Informative Note) Developed from ASHRAE Standard 189.1-2020, Addendum m, Appendix J, Table J-6 using combined pre-combustion and combustion values for 100-year GWP time horizon.

4.~~1.~~2. Emission Savings. Estimated emission savings for the facility or organization shall be calculated in accordance with Sections 4.1.2.1. through 4.1.2.3.

4.~~1.~~2.1. The baseline shall be based on normalized metered energy consumption from the previous year(s) by applying the emission factors determined in accordance with Section 4.1.1 to its Purchased Energy.

NOTE: see ISO 50001 and 50004 for guidance on how to normalize energy data and how to construct an energy baseline. Normalization is intended to make the data for different years mutually comparable, by netting out the effect of changes in production and possibly of weather for an industrial facility, and netting out the effects of changes in occupancy and weather for a building.

4.~~1.~~2.2. The normalized emissions of the facility or organization shall be determined by fuel type by applying the emission factors determined in accordance with Section 4.1.1 to the normalized energy use of the facility or organization. When renewable energy is employed, the emissions in each hour shall be the electricity consumption in that hour less the renewable energy production in that hour. Renewable energy production may be summed over many sources, both on-site and off-site.[5]

~~**NOTE:** for some hours this may be a negative number.~~

4.2 Emissions Factors. The CO_2e emission factors for electricity use shall be the levelized CO_2e combined combustion and pre-combustion, end-use emission rates having 100-year IPCC 6th Assessment Report Global Warming Potential as calculated using the 2023 Cambium database[6,7] for the Mid-case Scenario for the Long-Run Marginal month-hour CO_2e emission rates (lrmer_co2e) for the applicable Cambium Grid and Emission Assessment (GEA) region in accordance with the local ZIP Code using equation 4-2 with a starting year of 2024 and an ending year of 2031.[8,9,10]

$$LRMER_{levelized} = \frac{\sum_{t=0}^{n-1} \frac{LRMER_t}{(1+d)^t}}{\sum_{t=0}^{n-1} \frac{1}{(1+d)^t}} \quad \textbf{(Equation 4-2)}$$

where:

$LRMER_t$ = long-run marginal emission rate for year t

d = real social discount rate = 0.03

n = evaluation period in years = 8

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[5] Informative Note: for some hours this may be a negative number.

[6] (Normative Note) https://cambium.nrel.gov/

[7] (Normative Note) Gagnon, Pieter; Frazier, Will; Hale, Elaine, Cole, Wesley (2022): Long-run Marginal Emission Rates for Electricity - Workbooks for 2021 Cambium Data. National Renewable Energy Laboratory, Golden, CO. https://data.nrel.gov/submissions/183

[8] (Informative note) National Renewable Energy Laboratory (NREL) provides a spreadsheet tool for the calculation of levelized CO_{2e} emission rates that can be accessed at https://data.nrel.gov/submissions/183.

[9] (Informative Note) RESNET provides a spreadsheet of the hourly emission factors and ZIP code mappings that meet these criteria that can be accessed at https://www.resnet.us/wp-content/uploads/RESNET_2021_CO_{2e}_GEAdata.xlsx. [*To be developed*]

[10] (Informative Note) These Cambium CO_2e emission data are provided in units of kg/MWh.

~~**4.3** *Real Social Discount Rate (SDR)* – Rate at which CO_2e emission rates are discounted over time. The SDR does not include the time value of money that is included in nominal discount rates used in financial assessments, which include the general inflation rate such that the nominal rate equals (1 + real rate) times (1 + inflation rate) – 1.~~

4.~~4.3~~ Renewable Energy. Renewable energy shall be limited to sources that are not counted toward a renewable energy portfolio or toward a renewables acquisition goal of another organization, and comes from any combination of photovoltaic, geothermal energy (not including ground source heat pumps), or wind systems. Renewable Energy shall not include renewable Energy Credits (RECs) for which the time of production and the grid into which they are supplied is not known. RECs associated with on-site and off-site renewable energy production used for estimating CO2e emissions shall be retained and retired on behalf of the project.[11]

~~Notes on Renewable Energy:~~

~~Note 1: Geothermal energy that releases high levels of SO2 gases to the atmosphere does not qualify under this requirement.~~

~~Note 2: Wood pellet or solid wood combustion does not qualify if the GHG emissions associated with producing the wood-derived fuels are not at least 90% lower than those from gas-fired generation.~~

~~Note 3: For additional information on Renewable Energy Credits (RECs), see:~~

~~EPA Overview of Renewable Energy Certificates~~

~~National Renewable Energy Laboratory (NREL) REC Resources~~

5. Normative References:

ANSI/RESNET/ICC ~~301-2022~~ 301-2025 "Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index" and ANSI approved Addenda. Residential Energy Services Network. Oceanside, CA.

[11](Informative Note):

1. Geothermal energy that releases high levels of SO2 gases to the atmosphere does not qualify under this requirement.
2. Wood pellet or solid wood combustion does not qualify if the GHG emissions and other air pollutants and associated with producing and combusting the wood-derived fuels are not at least 90% lower than those from gas-fired generation.
3. For additional information on Renewable Energy Credits (RECs), see:
   a. EPA Overview of Renewable Energy Certificates
   b. National Renewable Energy Laboratory (NREL) REC Resources

BSR/UL 62784, Standard for Safety for Vacuum Cleaners and Dust Extractors Providing Equipment Protection Level Dc for the Collection of Combustible Dusts – Particular Requirements

1. **Revisions to the proposal document dated November 22, 2024, per response to comments received.**

PROPOSAL

1DV.2 This includes dust extractors, for wet suction or dry suction, intended for commercial indoor use with or without attachments, to collect combustible dust in an explosive dust atmosphere. In the US only, Vacuum cleaners intended for Zone 22, Group IIIC are not permitted ~~in the US~~ because there are only Zone 20 and Zone 21 locations for this dust group.

2DV DR Modification of Clause 2 to add the following:

CSA C22.2 No. 0, General requirements – Canadian Electrical Code, Part II

4.1DV DR Modification of Clause 4.1 to add the following:

CSA C22.2 No. 0 shall form a part of and be read in conjunction with this Standard as far as the requirements apply, except that, where this Standard contains requirements that are at variance with those of CSA C22.2 No. 0, the requirements of this Standard shall take precedence.

BSR/UL 486D, Standard for Safety for Sealed Wire Connector Systems

1. Clarification of Component Requirements

PROPOSAL

2 Referenced Publications

2.1 Products covered by this standard shall comply with the reference installation codes and standard as appropriate for the country where the product is to be used. When the product is intended for use in more than one country, the product shall comply with the installation codes and standards for all countries where it is intended to be used.

2.2 Where reference is made to any Standards, such reference shall be considered to refer to the latest editions and revisions thereto available at the time of printing, unless otherwise specified.

C22.2 No. 198.1, *Extruded Insulating Tubing*

UL 224, *Extruded Insulating Tubing*

6.1A General

6.1A.1 A component of a product covered by this standard shall comply with the requirements for that component. See Clauses 6.2 to 6.4 for the applicable standards covering components generally used in the products covered by this Standard. A component shall comply with the CSA Group, ULSE and ANCE standards, as appropriate for the country where the product is to be used.

6.3 Heat-Shrinkable Tubing

6.3.1 Heat-shrinkable tubing shall comply with UL 224 or CSA C22.2 No. 198.1.

2. Correction to Markings Section

PROPOSAL

10.2 The markings in 10.1, 10.3, 10.4, 10.5, ~~and~~ 10.6, and 10.7 shall be on any of the following:

a) All parts that comprise the system;

b) The packaging carton;

c) The unit container; or

d) The information sheet provided in each unit container.

BSR/UL 1008M, Standard for Safety for Transfer Switch Equipment, Meter-Mounted.

1. Modifying text to clarify the installation of a meter mounting device

PROPOSAL

1.1 These requirements cover automatic and non-automatic (manual) transfer switch equipment, operating at 600 V ac or less and 200 A or less, intended for insertion into the jaws of the meter socket of a meter-mounting device ~~installation in a meter socket~~ and used in non-hazardous locations in accordance with the National Electrical Code (NEC), NFPA 70, and the Canadian Electrical Code, Part I, CSA C22.1.

Note: In the United States, the term meter-mounting device refers to an enclosed meter socket.

1.3 When these devices are connected between the meter mounting socket and the electric utility (supply authority) meter, and installed on the line side of the service disconnect, approval by the serving utility may be required before installation.

1.4 These requirements only cover transfer switches which are completely enclosed and have no accessible energized parts when installed in a meter socket in conjunction with the electrical utility meter.

9.5 A transfer switch that is to be retrofitted to an existing meter socket shall be provided with a means to ensure that the system is tamper-resistant once ~~installed onto the~~ inserted into the jaws of the meter socket. A suitable tamper-resistant system may include but is not limited to: securing with tamper-resistant screws or the manufacture of the transfer switch and meter-mounting device (meter socket) as one complete assembly. Means shall be provided for the serving utility/supply authority to seal the equipment so that the meter cannot be removed without breaking the seal, in accordance with CSA C22.2 No. 115. For some constructions, this may require sealing the meter to the transfer switch, and also sealing the transfer switch to the meter socket.