ASHRAE Shaping Tomorrow's Built Environment Today

Volume XII, Issue 10

March 11, 2022

STANDARDS ACTIONS

PUBLIC REVIEW—CALL FOR COMMENTS

Constructive comments are invited for the following Public Review Drafts at https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts. All activity for reviewing and commenting on public review drafts can be accomplished completely online. To obtain a paper copy of any Public Review Draft contact ASHRAE, Inc. Attn: Standards Public Review, 180 Technology Parkway, Peachtree Corners, GA 30092, or via email at: standards.section@ashrae.org. **Note: Paper copies are available for $35.00/copy if 100 pages or less and $45.00 if over 100 pages.**

30-day Public Review from March 11, 2022 to April 10, 2022

- **1st Public Review of BSR/ASHRAE Addendum *r* to ANSI/ASHRAE Standard 15-2019, *Safety Standard for Refrigeration Systems***

This proposed addendum revises the definition of "machinery room" to be consistent with Section 8, "Installation Restrictions," as modified by Addendum *h* to ANSI/ASHRAE Standard 15-2016.

- **2nd ISC Public Review of BSR/ASHRAE Addendum *b* to Standard 41.10-2020, *Standard Methods for Refrigerant Mass Flow Rate Measurements Using Flowmeters* (Second ISC Public Review Draft)**

This addendum adds new definitions to Section 3, adds a new Section 5.4, and revises several other sections (5.1, 5.5, 5.7.2, 5.8.2, 9.1, 10.5, 10.6, and 11).

- **1st Public Review of BSR/ASHRAE Addendum *h* to ANSI/ASHRAE Standard 62.1-2019, *Ventilation for Acceptable Indoor Air Quality***

This proposed addendum is to address Minimum Maintenance Activity and Frequency for Ventilation System Equipment and Associated Components.

- **1st Public Review of BSR/ASHRAE Addendum *i* to ANSI/ASHRAE Standard 62.1-2019, *Ventilation for Acceptable Indoor Air Quality***

ASHRAE/ASHE Standard 170 in its 2021 version has added Table 8-2 which convers low infection risk outpatient facilities. Table 8-2 lists Ra and Rp values for spaces in outpatient facilities that are also shown in ASHRAE 62.1-2019. This proposed addendum aims at coordination of the two standards by deleting the outpatient spaces from Table 6-1. However, building codes (e.g. IMC) still do not reference ASHRAE/ASHE Standard 170 for Business Occupancy (B) Outpatient facilities. For this reason, the spaces deleted from Table 6-1 are now added to a normative appendix to provided AHJs with Ra and Rp values for outpatient facilities not covered by Standard 170. In addition, some ventilation rates and air classifications have been aligned with ASHRAE/ASHE Standard 170.

PUBLIC REVIEW—CALL FOR COMMENTS

- **1st Public Review of BSR/ASHRAE/ICC/USGBC/IES Addendum *p* to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2020, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings***

This proposal consolidates filtration requirements that were previously split between PM10 and PM2.5 to prevent confusion when both are applicable. Under the new requirements, air cleaners for both PM10 and PM2.5 levels would be required to have a MERV 13 filter or greater.

- **3rd Public Review ISC of BSR/ASHRAE/IES Addendum *ac* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Addendum ac proposes updates to interior lighting power and control requirements. A major change under review has been the removal of parking garage daylight transition lighting from the exempted requirements. Since the first public review, additional changes have been suggested by commenters to refine the definition of parking garage daylight transition zone. Additionally, commenters have helped develop more precise language for the video broadcasting category seen in this ISC.

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *ba* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

In this independent substantive change to addendum ba, some of the LPD values proposed in the first public review draft are being revised based on commenter feedback, specifically: lobbies, restrooms, and gym playing areas. These LPDs were selected to achieve energy savings in a manner that accommodates current best design practices.

ASHRAE Shaping Tomorrow's Built Environment Today

Volume XII, Issue 10

March 11, 2022

STANDARDS ACTIONS

PUBLIC REVIEW—CALL FOR COMMENTS

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *bb* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This ISC adjusts the LPD allowances for the Building Area Method compliance path based on proposed changes to the space-by-space LPDs in Addendum ba used to compute them.

- **1st Public Review of BSR/ASHRAE/IES Addendum *bt* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Proposes updates to Appendix G to clarify modeling for hot water pumps, chilled-water pumps, and preheat coils in the baseline design; specifically, 1) pumps should not be modeled as running when a load is not present in the hot or chilled water loop, and 2) the preheat coil setpoint should be based on the maximum setpoint of the HVAC zones served by the system.

- **1st Public Review of BSR/ASHRAE/IES Addendum *bv* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum updates the Building Performance Factors (BPFs) that are used for determining compliance with Appendix G (see Section 4.2.1.1.) The current BPFs represent the savings of a design minimally compliant with the current edition of Standard 90.1 compared to a design compliant with Standard 90.1-2004. The updated BPFs were determined using prototype energy models developed by PNNL to be consistent with Appendix G baseline rules; an additional factor was then applied across the resulting BPFs in anticipation of further energy improvements before the final 2022 publication.

- **1st Public Review of BSR/ASHRAE/IES Addendum *bw* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

The purpose of this addendum is to clarify that the specified fan energy index (FEI) in Section 6.5.3.1.3 is the value determined "at its highest design airflow rate." This addendum also modifies an exception to the FEI requirements to clarify that emergency operation can be performed by normal fans.

PUBLIC REVIEW—CALL FOR COMMENTS

- **1st Public Review of BSR/ASHRAE/IES Addendum *bz* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Adds language to the Section 6.5.6 (Energy Recovery) to clarify that energy recovery performance is based on the enthalpy recovery ratio where humidification is being provided, while it is based on the sensible energy recovery ratio where humidification is not provided.

- **1st Public Review of BSR/ASHRAE/IES Addendum *ce* to ANSI/ASHRAE/IES Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings**

Addendum ce adds a reference standard (ANSI/AISI/COFS S250) to support changes to the envelope provisions related to steel framed walls. This addition enables the use of steel framed walls with framing spacing between 6 to 24 inches and a wider range of member sizes, which eliminates the need to take an alternate approach for obtaining approvals. ANSI/AISI/COFS S250 also provides a means for evaluating wall assemblies wherein all insulation is located outside the wall cavity.

- **1st Public Review of BSR/ASHRAE/IES Addendum *cf* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Proposes changes to the elevator requirements in Section 10.4.3 for overall energy improvements, including more efficient lighting and ventilation fans.

- **1st Public Review of BSR/ASHRAE/IES Addendum *cg* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Adds a new definition and requirements for insulated metal panels (IMPs) used in the building envelope with details on determining U-factors for IMPs used in roof, wall, and floor assemblies.

ASHRAE Shaping Tomorrow's Built Environment Today

Volume XII, Issue 10

March 11, 2022

STANDARDS ACTIONS

PUBLIC REVIEW—CALL FOR COMMENTS

- **1st Public Review of BSR/ASHRAE/IES Addendum *ci* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum proposes an expansion to requirements so that economizers are required for individual fan-cooling units greater than 33,000 Btu/h (9.7 kW) located outside the building envelope.

- **1st Public Review of BSR/ASHRAE/IES Addendum *cj* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Corrects errors identified in the minimum efficiency requirements for centrifugal chillers in Table 6.8.1-16. Both IP and SI tables contain errors in the size category column and those capacity ranges needed to be adjusted. This addendum also contains corrections to errors that were identified in the efficiencies listed for capacity categories 3 and 4 in the IP table only.

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *al* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum introduces a new option for lighting compliance. Currently users can choose from three prescriptive options or a modeling-based method; this alternate path would allow a performance approach that is not dependent on meeting each of the prescriptive requirements in Section 9. This 2nd public review ISC addresses public review comments regarding conflict of mandatory lighting control and exterior lighting requirements. It also updates the header in Table 3.5-1 to correct column label acronyms.

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *ar* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum proposes new requirements for lighting used within indoor plant growth facilities using a new metric, photosynthetic photon efficacy (PPE), developed by the American Society of Agricultural and Biological Engineers (ASABE) for the ANSI/ASABE S640 standard. This ISC modifies the first public review draft to enable the use of luminaires with removable and/or serviceable lamps; it also improves upon the definitions of "greenhouse" and "indoor grow," lowers the stringency for smaller indoor grow facilities, and removes daylight control requirements.

PUBLIC REVIEW—CALL FOR COMMENTS

- **1st Public Review of BSR/ASHRAE/IES Addendum *bq* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum adds a requirement to perform electrical energy monitoring with separate metering for refrigeration systems where refrigeration accounts for 10% or more of the building load.

- **1st Public Review of BSR/ASHRAE/IES Addendum *br* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum increases the efficacy threshold for lamps and luminaires in Section 9.4.3 (Dwelling Units) and proposes new requirements for lighting controls serving the interior and exterior of a dwelling unit.

- **1st Public Review of BSR/ASHRAE/IES Addendum *cc* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Proposes a modest (and cost-effective) increase to the on-site renewable energy requirement in Section 10.5.1.1 previously added by published Addendum by. At the new prescribed values, 0.5 W/ft^2 (5.4 W/m^2), modeling has shown that less than 3 – 16% of roof space would be required, depending on the building type. Existing exceptions to the requirements and tradeoff options in the performance path are not being modified.

- **1st Public Review of BSR/ASHRAE/IES Addendum *cq* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Modifies Appendix G to align with changes made to Section 6, including the removal of equations that should no longer be referenced and the combination of efficiency requirements for PTAC and PTHP of different capacities. This addendum also adjusts how equipment is identified, going from "water-cooled" to "liquid-cooled" to describe displacement and centrifugal chillers in Table G3.5.3

ASHRAE Shaping Tomorrow's Built Environment Today

Volume XII, Issue 10

March 11, 2022

STANDARDS ACTIONS

PUBLIC REVIEW—CALL FOR COMMENTS

- **1st Public Review of BSR/ASHRAE Addendum n to ANSI/ASHRAE Standard 154-2016, *Ventilation for Commercial Cooking Operations***

This addendum updates Normative References and adds two new references.

45-day Public Review from March 11, 2022 to April 25, 2022

- **2nd Public Review of ASHRAE Guideline 42P, *Enhanced Indoor Air Quality in Commercial and Institutional Buildings***

Proposed Guideline 42 is intended for a global audience and will provide guidance to engineers, designers, hygienists, air quality practitioners, and building owners on measures which may be taken to enhance IAQ in commercial and institutional buildings. The sections in this document will provide a roadmap of varied best practices regarding buildings and systems that augment air quality within the built environment. This guidance is not intended to be all inclusive, nor does it guarantee enhanced ventilation, it will however, guide the audience through concepts, research, and processes that have been developed and implemented successfully when designed, installed, and operated effectively.

- **4th Public Review of BSR/ASHRAE Addendum *ag* to ANSI/ASHRAE Standard 62.1-2019, *Ventilation for Acceptable Indoor Air Quality***

This proposed addendum replaces the calculation method in current Normative Appendix B2 (Separation of Exhaust Outlets and Outdoor Air Intakes) with a new method based upon ASHRAE Research Project 1635(2016). This research was sponsored by ASHRAE Technical Committee (TC) 4.3. The purpose of this Research Project is to provide a simple, yet accurate procedure for calculating the minimum distance required between the outlet of an exhaust system and the outdoor air intake to a ventilation system to avoid re-entrainment of exhaust gases. The new procedure addresses the technical deficiencies in the simplified equations and tables that are currently in Standard 62.1-2019 Ventilation for Acceptable Indoor Air Quality and model building codes.

PUBLIC REVIEW—CALL FOR COMMENTS

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *aq* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Addendum aq introduces requirements for service water heating piping insulation and reorganization of existing pipe insulation tables developed for space heating. The purpose of this ISC is to propose two new exceptions to the insulation requirements where piping passes through a framing member or connects to a vertical support.

- **2nd Public Review of BSR/ASHRAE/IES Addendum *bd* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Proposes a new normative appendix (Appendix J) to list chiller performance curve (A-X) inputs based on system type from Table 6.8.1-3. This provides a resource for Chapter 11 or Appendix G users to model minimally-compliant chiller performance for budget and baseline building designs, and for a proposed building design when specific equipment performance is unknown. To accommodate different simulation programs, values are provided for both modeling inputs in IP and SI units. Section 11 and Appendix G were modified to include language pointing users to Appendix J where performance curves are supported by their simulation program.

- **2nd Public Review of BSR/ASHRAE/IES Addendum *bo* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum is an update to the fan power limits in Section 6.5.3.1. The effect of this update would be, on average, a 10% increase in stringency across most fan system types. The new requirements provide the following improvements as explained during the first public review: 1) actual electrical input power and efficiency of fan transmission, motor, or variable-speed controller are considered; 2) small, medium, and large air handling systems are covered; 3) the growing use of hot gas reheat coils, water economizer coils, and series energy recovery is acknowledged with new fan power allowances; 4) the scope is expanded to include fan systems that do not include a source of heating or cooling (e.g., large energy recovery ventilators), all fans serving interior spaces, and fans used in alterations. Finally, the power threshold has been reduced to 1 kW input power

STANDARDS ACTIONS

PUBLIC REVIEW—CALL FOR COMMENTS

from 5 motor nameplate horsepower so that fewer fan systems are excluded. This second public review draft incorporates all of the above changes proposed during the first public review, but with an increase to the fan power allowance for alterations and revisions to correct errors identified in the fan power tables.

- **1st Public Review of BSR/ASHRAE/IES Addendum *bs* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Updates the lighting power allowances (LPA) in Section 9.3, Simplified Building Method Compliance Path to maintain alignment with the established method (0.9x the Building Area Method LPA values.) This proposal also removes an exception that allowed alterations to meet an efficacy adjustment as that was to encourage the installation of LEDs now in widespread use. Finally, Table 9.3.1-1 was reformatted to clarify how compliance is achieved based on the total building LPA.

- **1st Public Review of BSR/ASHRAE/IES Addendum *bx* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Modifies Table 6.8.1-5 for warm air furnace efficiency requirements to more accurately distinguish between different products and test procedures based on locations in which they are used and their status as DOE or non-DOE covered products.

- **1st Public Review of BSR/ASHRAE/IES Addendum *cm* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Updates Section 12 (Normative References) where applicable to reflect new effective dates and additional materials being cited in the standard.

PUBLIC REVIEW—CALL FOR COMMENTS

- **3rd Public Review ISC of BSR/ASHRAE/IES Addendum *ag* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Addendum ag introduced a new proposed method to Standard 90.1 entitled the Total System Performance Ratio (TSPR) that would provide an additional path for mechanical system compliance. This third public review ISC draft takes consideration of various comments received by committee members and reviewers of the previous two drafts. A full list of changes is provided in the foreword. In summary: clarifications have been made to better identify system parameters, heat pump supplementing control limits, and DOAS efficiency inputs; software testing requirements are more thoroughly detailed; and new text is added to efficiency inputs; software testing requirements are more thoroughly detailed; and new text is added to validate the use of part-load adjustment methods in addition to part-load curves. This ISC also addresses concerns related to building geometry limitations associated with the simplified block model by allowing zoning configurations with greater complexity.

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *am* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This ISC makes additional revisions to the lighting control requirements in Table 9.4.2-2. In response to comments received during the first public review of addendum am, walkways of all widths have been combined into one category and walkway LPAs are now based on W/linear ft (m) instead of area.

STANDARDS ACTIONS

PUBLIC REVIEW—CALL FOR COMMENTS

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *ap* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Addendum ap introduces a new section to Standard 90.1 for the use of energy credits to enable a modest increase to the stated baseline efficiency requirements. A total of 33 measures are included for use in all climate zones, covering eight building types. The credit requirement is about a 4-5% additional energy cost savings for most buildings, based on national average energy prices used for ASHRAE 90.1 analysis. While selection of measures is flexible for individual buildings, the requirements were based on a cost -effective demonstration package identified for each building type and climate zone. In this ISC, the number of credits associated with several measures has been revised, in most cases, based on an updated analysis. Thresholds have also been modified for all project types: new buildings, additions, alterations, and build-outs. Various comment-based changes have been implemented such as removal of the service water heating measure previously used to demonstrate cost effectiveness for multifamily buildings. Substantive changes have been made to H02/H03 (calculating HVAC efficiency), H06 (proration of DOAS credits), W01/02/03 (use of COP or UEF, combination systems, removal of exhaust air limitation), and a new measure H07 for Guideline 36 control sequences was introduced. In lighting, the simplified building method is now an option for L03 and the maximum LPD reduction for L06 was lowered from 15% to 10%. Finally, load management and renewable measures can now be combined to achieve up to 60% of the required credits.

PUBLIC REVIEW—CALL FOR COMMENTS

- **4th Public Review ISC of BSR/ASHRAE/IES Addendum *av* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Addendum av was first launched during revision of 90.1-2016 following the publication of ASHRAE Research Project 1365 which found that unaccounted heat flow through the cumulative impact of thermal bridges can increase the annual energy consumption associated with the building envelope. This ISC is a continuation of exhaustive efforts to respond to previous review comments and primarily includes revisions for clarity throughout Section 5.5.5.1 and Appendix J.

- **2nd Public Review ISC of BSR/ASHRAE/IES Addendum *ay* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum is in response to an update making AHRI-1230-2021 the DOE-approved test procedure for Variable Refrigerant Flow (VRF) equipment. In the first public review draft, the new test procedure was added for VRF equipment in Tables 6.8.1-8 and 6.8.1-9. In this ISC, the corresponding EER values for VRF equipment are being lowered between 4.2 and 6.7% to account for the increased stringency of the test procedure, which has resulted in lower ratings for the same equipment. With these changes, minimum full load efficiency is still expected to increase by 8-10%.

- **1st Public Review of BSR/ASHRAE/IES Addendum *cl* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

This addendum modifies defined terms to cover three existing definitions – "authority having jurisdiction," "building official," and "code official" – under one term, "code official." This is intended to clarify application of the standard and create alignment with the 2021 IECC.

ASHRAE Shaping Tomorrow's Built Environment Today

Volume XII, Issue 10

March 11, 2022

STANDARDS ACTIONS

PUBLIC REVIEW—CALL FOR COMMENTS

- **1st Public Review of BSR/ASHRAE/IES Addendum *co* to ANSI/ASHRAE/IES Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential Buildings***

Proposes new performance requirements for alterations. Larger retrofit projects are allowed a 5% increase in Building Performance Factor (BPF) relative to new construction, while smaller projects – as defined by the percentage of HVAC, lighting, and envelope items being replaced – are now subject to a new Section G3.3.

PUBLICATION NOTICE

The standards and guideline documents listed below are now available for purchase on the ASHRAE website at: http://www.ashrae.org/published-standards, or by contacting the Sales Department at: ASHRAE, 180 Technology Parkway, Peachtree Corners, GA 30092. Email: orders@ashrae.org. Fax: 404-321-5479. Telephone: 404.636.8400 (worldwide) or toll free at 1.800.527.4723 for orders in the U.S. and Canada. Addenda may be downloaded for free on the ASHRAE website at: http://www.ashrae.org/standards-addenda.

- **ANSI/ASHRAE Standard 41.2-2022, *Standard Methods for Air Velocity and Airflow Measurement***
- **ANSI/ASHRAE Standard 118.2-2022, *Method of Testing for Rating Residential Water Heaters***
- **ANSI/ASHRAE Standard 120-2022, *Method of Testing to Determine Flow Resistance of HVAC Ducts and Fittings***
- **ANSI/ASHRAE Standard 139-2022, *Method of Testing for Rating Desiccant Dehumidifiers Utilizing Heat for the Regeneration Process***
- **ANSI/ASHRAE Standard 174-2022, *Method of Test for Rating Desiccant-Based Dehumidification Equipment***

INTERPRETATIONS

A new official interpretation to the following standard is now available on the ASHRAE website at: http://www.ashrae.org/standards-interpretations.

- **ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings,*** dated February 28, 2022

INTERIM MEETINGS

A complete listing of project committee interim meetings is provided on ASHRAE's website at: https://www.ashrae.org/technical-resources/standards-and-guidelines/project-committee-interim-meetings.

- **GPC 14-2014R, *Measurement of Energy, Demand and Water Savings,*** will hold conference calls on the following dates and times:
  - ⇨ March 30, 2022, from 11:00 am to 12:30 pm (Eastern)
  - ⇨ April 13, 2022, from 11:00 am to 12:30 pm (Eastern)

  For additional information contact Dennis Landsberg, Chair of GPC 14 (drlrm@aol.com).

- **SSPC 15, *Safety Standard for Refrigeration Systems,*** will hold virtual meetings on the following dates:
  - ⇨ Friday, March 25th, 2022, from 10:00 AM to 1:00 PM (Eastern)
  - ⇨ Friday, April 22nd, 2022, from 10:00 AM to 1:00 PM (Eastern)
  - ⇨ Friday, May 20th, 2022, from 10:00 AM to 1:00 PM (Eastern)

  The Standard 15.2P Subcommittee, *Safety Standard for Refrigeration Systems in Residential Applications*, will hold virtual meetings on the following dates:
  - ⇨ Tuesday, March 22nd, 2022, from 1:15 PM to 2:30 PM (Eastern)
  - ⇨ Wednesday, March 23rd, 2022, from 1:15 PM to 2:30 PM (Eastern)

  For additional information, please contact Ryan Shanley, Staff Liaison to SSPC 15 (rshanley@ashrae.org).

ASHRAE Shaping Tomorrow's Built Environment Today

Volume XII, Issue 10

March 11, 2022

STANDARDS ACTIONS

INTERIM MEETINGS

- **SPC 22-2018R,** ***Methods of Testing for Rating Liquid -Cooled Refrigerant Condensers,*** will hold a conference call on March 24, 2022, from 1:00 pm to 2:00 pm (Eastern). For additional information contact Joseph Huber, Chair of SPC 22 (jhuber@multistack.com).

- **SPC 220P,** ***Method of Testing for Rating Small Commercial Blast Chillers, Chiller-Freezers, and Freezers,*** will hold a web meeting on March 30, 2022 from 1:00 pm to 3:00 pm (Eastern). For additional information contact Oliver Ta, Chair of SPC 220 (oliver.ta@sce.com).

- **SPC 514P,** ***Risk Management for Building Water Systems: Physical, Chemical, and Microbial Hazards,*** will hold a virtual meeting on Thursday, March 31st, 2022, from 10:00 AM to 12:30 PM (Eastern). For additional information, please contact Ryan Shanley, Staff Liaison to SPC 514P (rshanley@ashrae.org).

JOIN A LISTSERVE

Click on the following link to learn more about ASHRAE Standards Activities https://www.ashrae.org/listserves.

- ⇨ SSPC 41 — Standard Methods for Measurement
- ⇨ SSPC 62.1 — Ventilation for Acceptable Indoor Air Quality
- ⇨ SSPC 62.2 — Ventilation and Acceptable Indoor Air Quality in Residential Buildings
- ⇨ SSPC 90.1 — Energy Standard for Buildings Except Low-Rise Residential Buildings
- ⇨ SSPC 90.2 — Energy Efficient Design of Low-Rise Residential Buildings
- ⇨ SPC 90.4 — Energy Standard for Data Centers and Telecommunications Buildings
- ⇨ SSPC 161 — Air Quality within Commercial AirCraft
- ⇨ SSPC 188 — Legionellosis: Risk Management for Building Water Systems
- ⇨ SSPC 189.1 — Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings
- ⇨ Code Interaction Subcommittee (CIS)