NEWSLETTER

41st Anniversary
2025-2026 Session , Issue 2
May 2026
www.ashrae.org.my

ASHRAE's MISSION & VISION

Mission

To serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields.

Vision

A healthy and sustainable built environment for all.

Editorial Team
Ir Leong Siew Meng
Mr Calvin Soo Shui Zhen

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MASHRAE Secretariat:
Unit 518 Block A,
Kelana Business Centre,
97, Jalan SS7/2,
47301 Petaling Jaya,
Selangor Darul Ehsan.

MASHRAE 40th Anniversary Dinner
24 October 2025

President's Message

Law Kok Zhen (Kozen)
President
ASHRAE
Malaysia Chapter
(2025-2026)

ASHRAE Malaysia Chapter:

Greetings, esteemed members of the ASHRAE Malaysia Chapter!

It is my pleasure to welcome you to this edition of our ASHRAE Malaysia Chapter newsletter. As we step into another exciting season, our focus remains steadfast — to advance sustainable building technologies and strengthen professional collaboration within our community.

This year, we continue to embrace innovation through technical seminars, student engagement, and industry partnerships that promote energy efficiency and indoor environmental quality (IEQ). Together, we uphold ASHRAE's mission of shaping a sustainable built environment for a better future.

I encourage every member to participate actively, share knowledge, and inspire others. Your passion and involvement are what drive our chapter's success.Thank you for your continued support, and I look forward to seeing you at our upcoming events.

INTRODUCING
ASHRAE MALAYSIA TRAINING INSTITUTE (AMTI)

ASHRAE MALASYIA proudly present its new training facility namely **ASHRAE MALAYSIA TRAINING INSTITUTE (AMTI).**

Located next to the secretariat office at Kelana Jaya business center , it has a GFA of 1,600 sqft which is equipped with AV system and training facilities

The facility is also equipped with sound proof retractable partitions which can convert the premises into two rooms for more events to be conducted concurrently with little interruption.

We are thankful to Ir Tan Chioo Bin and his team for their meticulous planning and efforts in making this training facility possible!

INTRODUCING
ASHRAE MALAYSIA TRAINING INSTITUTE (AMTI)

MP & RP Networking Night
10 February 2026

MP & RP NEWS

A wonderful evening of connection and celebration with our members, special invited guests, and supportive friends from MACRA

Great conversations, HVAC fun games, yummy buffet dinner, and a joyful lou sang made the night truly memorable.

We also took this opportunity to express our heartfelt thanks to contributing companies and individual donors contributing to our research promotion fund.

Looking forward to many more events like this!

Future Trends in Cooling Technology
14 February 2026

CTTC

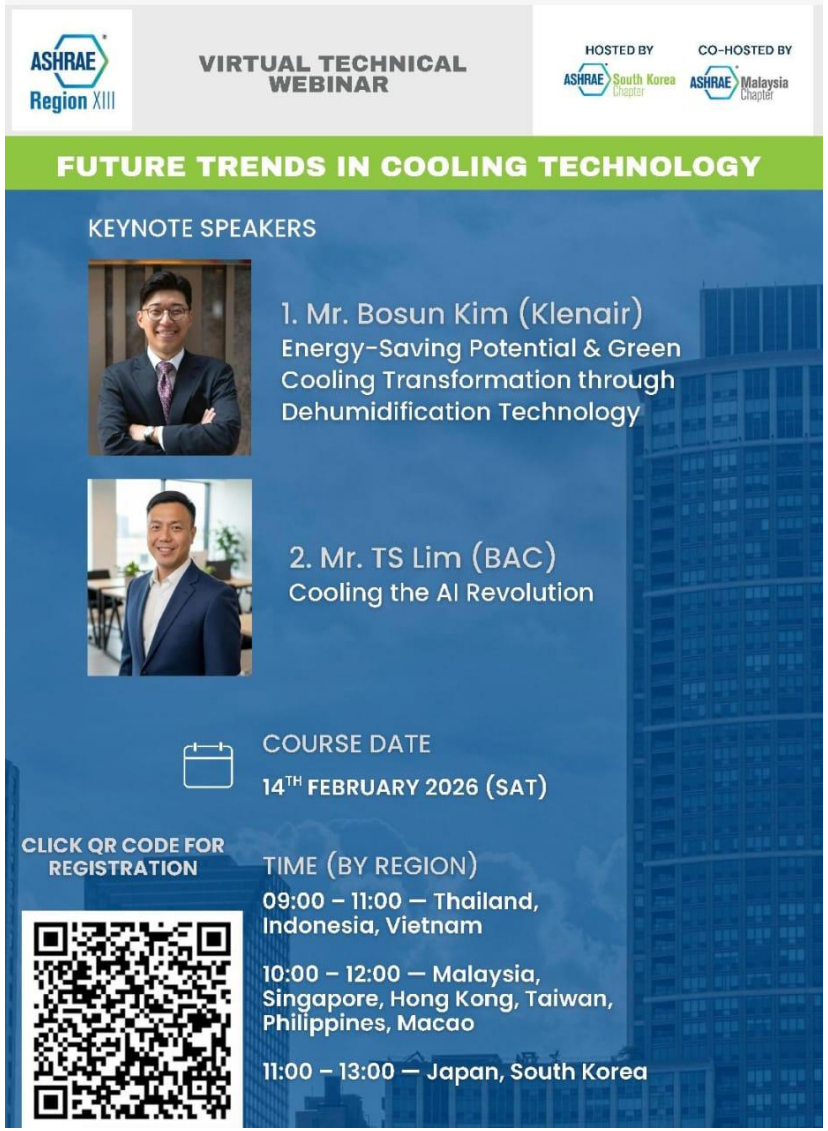
ASHRAE Malaysia Chapter

An engaging and timely session covering energy-saving potential through advanced dehumidification technology and cooling strategies for the AI revolution. With the rapid growth of AI and digital infrastructure, these discussions are more relevant than ever.

Special thanks to both experienced speakers, Mr Bosun Kim and our President-elect Mr Lim TS for their insightful sharing and practical perspectives — truly valuable takeaways for our industry!

This is the strength of a learning society like ASHRAE --> professionals across regions coming together to exchange knowledge, elevate standards, and grow collectively.

Looking forward to more impactful technical sessions ahead



Future Trends in Cooling Technology
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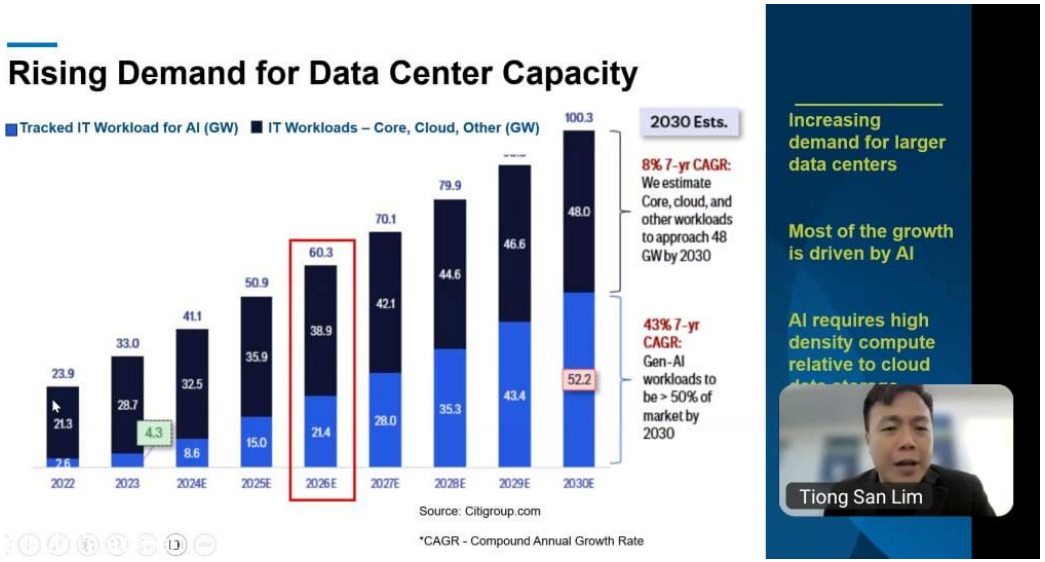


Registered Energy Manager Type 1 Course
9 to 13 March 2026

CTTC

ASHRAE Malaysia Chapter

An inaugural session was recently conducted, bringing together industry professionals committed to advancing energy efficiency and sustainable building operations.

Participants engaged in intensive training modules covering EECA, energy management system (EnMS), energy saving measures, system optimization, technical calculations, and practical case discussions, along with presentation and interview sessions to strengthen both technical and professional readiness.

Congratulations to all participants for your dedication toward becoming certified energy managers and driving sustainability in Malaysia's built environment. This was the first of six certification programmes scheduled for 2026.

Certified Energy Manager Type 1 Course
9 to 13 March 2026

CTTC

ASHRAE Malaysia Chapter

ASHRAE YEA Team Building: VR Gaming
28th March 2026

YEA

ASHRAE Malaysia Chapter

An exciting and energetic afternoon at our ASHRAE YEA Team Building 2026! 🥳 🥳 🥳

Held at VAR LIVE @ KLGCC Mall, participants experienced immersive virtual reality (VR) gaming, filled with fun, laughter, and great interactions throughout the session.

Beyond the games, it was a wonderful opportunity for members and friends to connect, network, and build stronger bonds within the ASHRAE community.

Thank you to everyone who joined us and made the event such a memorable one. Looking forward to more engaging YEA activities ahead!

ASHRAE YEA Team Building: VR Gaming
28th March 2026

YEA

ASHRAE Malaysia Chapter

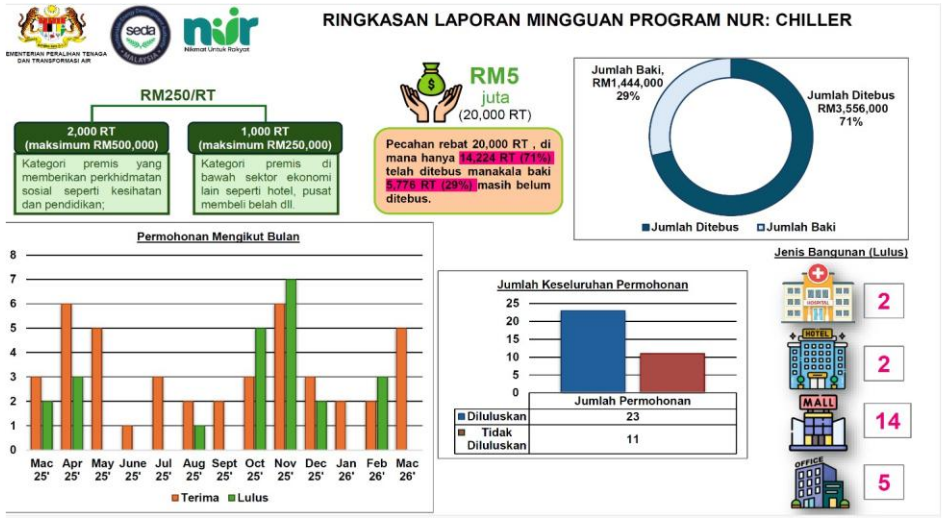
GAC Report
Date: 25th February 2026

Event:	Steering Committee Meeting No.9
Title:	SAVE 5.0 - Chiller Rebate Program
Organization:	SEDA under Ministry of Energy Transition and Water Transformation (PETRA)
Organizing Person:	Chairman: Steve Anthony Lojuntin
Department	Sustainable Energy Development Authority (SEDA)
Date:	Wednesday, 25th February 2026
Time:	10.00am to 12,30pm
Place:	**Hybrid**
MASHRAE representatives:	Ir. Ng Yong Kong, Ir Chen TL
Others attending	SEDA represented by Rizaudin Ismail, Elya Sara Syuhada Azhar, Muhmmad Farhan Asyraf Ahmad Hasri, , Siti Aishah Rasid, Ishamuddin Mazlan , Nur Afifah Hanim Abdul Halim, Noriza Bt. Mohamed Sufian from SIRIM and Ir. TL Chen. Absent with apologies: Ir. Dr. Cheong Thiam Fook
Representatives:	PETRA, SEDA, ACEM, MASHRAE, IEM, SIRIM
Report:	Update on NUR SEDA Chiller Rebate programme a) Initially there is an allocation of 25 million for the NUR project comes from 2 distinct funds. i. Fund no.1 consists of 20 million from MoF was not expended or not given. ii. Fund no.2 consists of 5 million from AAIBE which must be expended by 31/12/2026. iii. For the AAIBE's 5 million 3.2 Million is being used and remaining 1.8 Million b) Discussion was held on the chillers submitted/accepted, or which requires further information. c) As of 13/1/2026 no new applications were received. d) System using air cooled, WCPUs and VRF and changed to Chilled water system using water cooled chillers shall be eligible for the rebate. The Chiller rebate program will run from 1 Mar 2025 to 31 Dec 2026. The meeting discussed on the progress of this NUR Rabate to date and there were no new submissions. The meeting discussed on several projects that were submitted with insufficient data to convince the members present to approve it. The meeting also talked on approval and rejection of verifiers and approval of projects submitted. e) The next meeting will be held on Wednesday, 25th March 2026
Reported By:	Ir. Ng Yong Kong

GAC Report
Date: 3rd April 2026

Event:	Steering Committee Meeting No.10
Title:	SAVE 5.0 - Chiller Rebate Program
Organization:	SEDA under Ministry of Energy Transition and Water Transformation (PETRA)
Organizing Person:	Chairman: Steve Anthony Lojuntin
Department	Sustainable Energy Development Authority (SEDA)
Date:	Friday, 3rd April 2026
Time:	3.00pm to 4.30pm
Place:	**Hybrid**
MASHRAE representatives:	Ir. Ng Yong Kong
Others attending	SEDA represented by Rizaudin Ismail, Elya Sara Syuhada Azhar, Muhmmad Farhan Asyraf Ahmad Hasri, , Siti Aishah Rasid, Ishamuddin Mazlan , Nur Afifah Hanim Abdul Halim, Noriza Bt. Mohamed Sufian from SIRIM. Absent with apologies: Ir. Dr. Cheong Thiam Fook, Ir. TL Chen
Representatives:	PETRA, SEDA, ACEM, MASHRAE, IEM, SIRIM
Report:	Update on NUR SEDA Chiller Rebate programme a) For the AAIBE's 5 million, 3.55 Million or 71% is being used. b) Discussion was held for 5 new projects abd one new application for Verifier. The Chiller rebate program will run from 1 Mar 2025 to 31 Dec 2026. The meeting discussed on the progress of this NUR Rebate. The meeting also discussed on several projects that were submitted for approvel. The next meeting will be held in May and the date is TBC.

Reported By: Ir. Ng Yong Kong



GAC Report
Date: 18 April 2026

Chapter Chair:	GAC
Event:	IEM Annual Dinner
Organization:	The Institute of Engineer, Malaysia (IEM)
Organizing Person:	Ir Yau Chau Fong
Date:	Saturday, 18 April, 2026
Place:	**Sunway Resort**
MASHRAE Rep:	Ir. Keith Leow, Ir Leong Siew Meng, Dr King JY, Tan KY, Ir Dr Denise Lim, Shirley Chong, Tee Tone Vei, Ir Ng Yong Kong, Irin Kang, Ir Lam Kim Seong, Kozen Law, Chan Hou Yin, Victor Bong, Dr Chin Wai Meng, Dr Hui Kar Hoou, Ir Ong Ching Loon and Chea Suei Keong
Organization Invited:	It was a gathering of Engineering NGOs such as MACRA, TEEAM, BEM, PAM, MAESCO, MAREEM, etc.
Report:	Government departments such as Ministry of Science, Technology and Innovation (MOSTI), Ministry of Work, Minsitry of Energy Transition and Water Transformation, Energy Commission and etc.

GAC Report
Date: 18 April 2026

Chapter Chair:	GAC
Event:	KICK OFF MEETING FOR ST ENERGY USING PRODUCT (EUP) GUIDELINE UPDATES
Organization:	Suruhanjaya Tenaga (Energy Commission) Malaysia
Organizing Person:	Energy Commission EECA Regulatory Section- Technical Policy and Regulation Department
Date:	Tuesday, 21 April 2026
Place:	**Energy Commission (HQ)**
MASHRAE Rep:	Ir. Keith Leow (MASHRAE)
Report:	"The meeting provided an overview of the Energy Efficiency and Conservation Act 2024 (EECA 2024), including its regulatory implications for energy-using products. The organiser also outlined the working group's scope, which covers the review and enhancement of existing EUP requirements, as well as the proposed timeline for implementation. A technical briefing was also delivered by SIRIM Berhad, focusing on current and proposed testing methodologies and compliance requirements to support the implementation of new guideline. On behalf of the ASHRAE Malaysia Chapter, Ir Keith Leow attended the session and contributed to discussions related to energy efficiency, including alignment with international HVAC&R practices. Overall, the meeting successfully established the direction and framework for the EUP refrigerator guideline update. Further discussions and technical engagements are expected as the working group progresses."


MESYUARAT KICK OFF KUMPULAN KERJA
BAGI PEMBANGUNAN & KEMASKINI GARIS PANDUAN UNTUK
PRODUK MENGGUNAKAN TENAGA - PETI SEJUK DI BAWAH AKTA
KECEKAPAN DAN KONSERVASI TENAGA (EECA) 2024

GAC Report
Date: 8 May 2026

Chapter Chair:	GAC
Event:	Proposal for Introductory Engagement Meeting between JICA and MASHRAE
Title:	Achieving net-zero greenhouse gas (GHG) emissions.
Organization:	Japan International Cooperation Agency (JICA), SIRIM Bhd and Ministry of Natural Resources Environmental Sustainability (NRES)
Organizing Person:	Japan International Cooperation Agency (JICA)
Place:	**ASHRAE Malaysia Chapter Office**
MASHRAE Representatives:	Mr. Law Kok Zhen, Mr. Chea Suei Keong, Ir. Leong Siew Meng, Ir. Tan Chioo Bin and Ir. Den Low
NRES Representatives:	Ts. Dr. Mohd Arif bin Misrol
SIRIM Representatives:	En. Rafindde Ramli, En. Ahmad Hafiz, Pn. Nurul Syahidah Zafisah and Pn. Engku Noor Shuhada
JICA Representatives:	Mr. Noko Kuze, Mr. Akihiro Tamai, Mr. Yasuhiro Kasuya and Ms. Wan Aliaa
UTM Representatives:	Pn. Nazleatul Najiha Mohd Nazif and Pn. Farah Ainaa Bahandin

GAC Report
Date: 8 May 2026

Report: The purpose of this engagement aims to establish mutual understanding, explore opportunities for technical collaboration, and identify potential synergies related to climate reporting, energy efficiency, and data transparency in Malaysia.

Achieving net-zero greenhouse gas (GHG) emissions has become a global imperative in the fight against climate change. In alignment with this goal, the Federal Government of Malaysia has made significant strides in formulating and strengthening climate change policies.

Robust tracking systems are essential for successful implementation of policies — they instill confidence in implementation efforts, support timely course corrections, and demonstrate accountability. In line with this, the United Nations Framework Convention on Climate Change (UNFCCC) requires countries to submit regular reports on GHG emissions and the progress of their Nationally Determined Contributions (NDCs) through Biennial Transparency Reports (BTR).

To enhance its national capacity in this area, the Ministry of Natural Resources and Environmental Sustainability (NRES) has partnered with the Japan International Cooperation Agency (JICA). This collaboration has played a pivotal role in strengthening institutional and technical capabilities related to BTR.

One area receiving increased attention through this partnership is the monitoring of hydrofluorocarbons (HFCs), a group of potent greenhouse gases commonly used as refrigerants. HFC consumption has grown rapidly in recent years, making it a critical focus for research and data improvement. Understanding current usage patterns and developing targeted mitigation strategies are essential for effective climate action.

Conclusion

1. A shared understanding of JICA and ASHRAE's roles and expertise
2. Identification of technical collaboration opportunities
3. Possible on next steps, including possible working sessions or technical workshops
4. Establishment of a communication channel between both organisations

GAC Report
Date: 13 May 2026

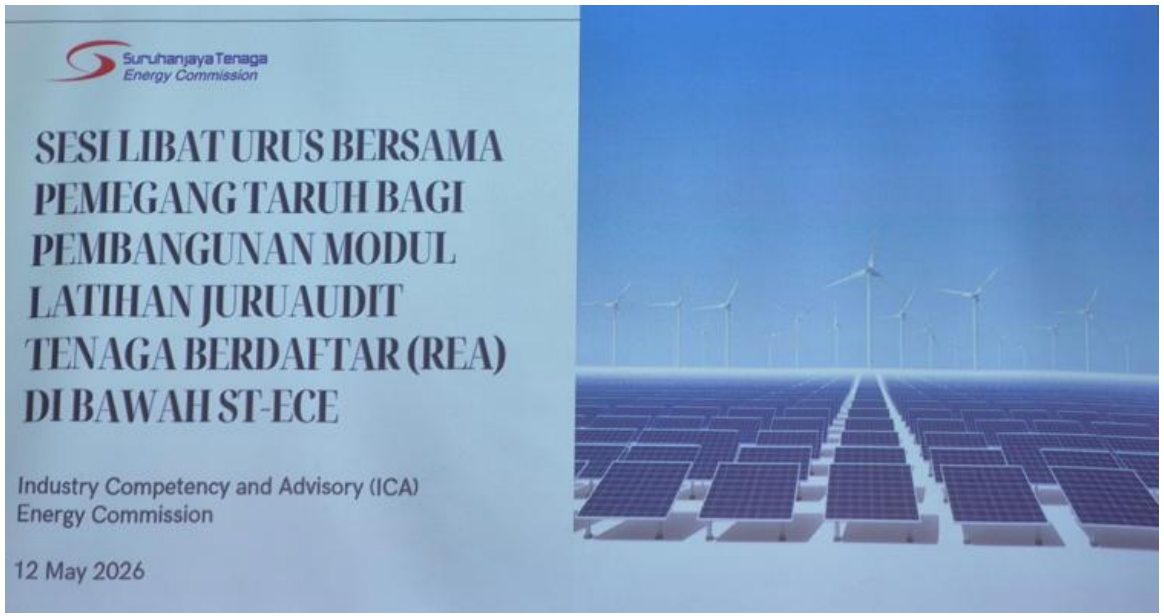
Event:	ENGAGEMENT SESSION BETWEEN ENERGY COMMISSION (ST) AND STAKEHOLDERS ON REGISTERED ENERGY AUDITOR MATTER
Title	SESI LIBAT URUS PEMEGANG TARUH BAGI PEMBANGUNAN KERANGKA LATIHAN JURUAUDIT TENAGA BERDAFTAR (REA) DI BAWAH PROGRAM ST-ENERGY COMPETENCY EXCELLENCE (ST-ECE)
Organization:	Suruhanjaya Tenaga (Energy Commission) Malaysia
Organizing Person:	Energy Commission EECA Regulatory Section- Technical Policy and Regulation Department
Date:	Tuesday, 13 MAY 2026
Place:	**MERCURE LIVING HOTEL (PUTRAJAYA)**
MASHRAE Rep:	Ir. Keith Leow (MASHRAE)

Report:

An engagement session between Suruhanjaya Tenaga (ST) and stakeholders on matters relating to Registered Energy Auditors (REA) was conducted with participation from industry stakeholders and existing REAs. During the session, ST provided updates on the implementation of the Energy Efficiency and Conservation Act 2024 (EECA 2024), including regulatory compliance matters, industry developments, and relevant statistics related to registration of REM, REA and training institute in Malaysia.

The engagement primarily focused on gathering industry input and feedback on the newly drafted REA training modules. Discussions were also held on addressing the current shortage of Registered Energy Auditors and identifying practical measures to strengthen industry capacity in order to meet growing market demand arising from EECA implementation.

On behalf of the ASHRAE Malaysia Chapter, Ir Keith attended the session and participated in discussions related to industry competency development, training quality, and energy efficiency practices. The engagement session provided a constructive platform for collaboration between regulators and industry stakeholders to further enhance the REA framework and support the effective implementation of EECA 2024.


Suruhanjaya Tenaga
Energy Commission
SESI LIBAT URUS BERSAMA PEMEGANG TARUH BAGI PEMBANGUNAN MODUL LATIHAN JURUAUDIT TENAGA BERDAFTAR (REA) DI BAWAH ST-ECE
Industry Competency and Advisory (ICA)
Energy Commission
12 May 2026

GAC Report
Date: 25 May 2026

Event:	Technical Committee Meeting No. 1/2026
Title	Technical Committee on Smoke Management (NSC 13/TC 4) for Malaysian Standards
Organization:	Ministry of International Trade and Industry
Government Agency:	Department of Standards Malaysia
Date:	Monday, 25 MAY 2026
Place:	**Department of Standards Malaysia**
MASHRAE Rep:	Ir. Chen TL, Ir. Lam KS and Ir. CB Tan
Agenda:	Deliberation on MS 1471 Part 3,4,5 & 8, MS 1472, MS 1780, MS 2586 Part 1, 7 & 10
Representatives:	Technical Committee Chairman - Ir. Chen TL a) ASHRAE Malaysia Chapter b) Malaysia Fire and Rescue Department (JBPM) c) Association of Consulting Engineers (ACEM) d) Pertubuhan Akitek Malaysia (PAM) e) The Institution of Engineers Malaysia (IEM) f) The Institution of Fire Engineers (UK) Malaysia Branch (IFEM) g) Universiti Putra Malaysia (UPM) h) Universiti Teknologi Mara (UiTM) i) SIRIM QAS International Sdn Bhd (SIRIM)
Report:	This is the 1st technical committee meeting of 2026 The standard listed above were deliberated for confirmation and/or review for updates

MASHRAE BOG Meeting cum CNY Dinner
10 March 2026

ASHRAE Malaysia Chapter

An evening well spent with the ASHRAE Malaysia family.

Our BOG & Committee Meeting cum Chinese New Year Celebration Dinner brought together chapter leaders and ASHRAE Student Branch members for a night of networking, laughter, and celebration was held on 10 March 2026

It's always inspiring to see industry professionals and future engineers connecting and learning from one another.
Thank you everyone for making the evening so memorable ❤️

ASHRAE Malaysia–Singapore Bilateral Meeting
11 April 2026

A meaningful and engaging day as ASHRAE Malaysia Chapter and ASHRAE Singapore Chapter came together to reconnect, share, and strengthen regional ties within the HVAC&R community!

From insightful technical discussions and factory visits to genuine conversations and laughter, the session went beyond knowledge exchange—it was about building friendships and growing together as one community.
And of course, no great gathering is complete without sumptuous lunch and good times sharing great food together, making the connections even more memorable.

Moments like these remind us that collaboration is not just about work, but about people
Thank you to all participants and host companies for the warm hospitality and shared experiences. Looking forward to many more collaborations ahead

ASHRAE Malaysia–Singapore Bilateral Meeting
11 April 2026

CHAPTER ACTIVITIES

ASHRAE Malaysia Chapter

2025-26 Board of Governors' Meetings

- **BOG Meeting #1 held on 15 July 2025**
- **BOG Meeting #2 held on 5 August 2025**
- **BOG Meeting #3 held on 9 September 2025**
- **BOG Meeting #4 held on 7 October 2025**
- **BOG Meeting #5 held on 18 November 2025**
- **BOG Meeting #6 held on 9 December 2025**
- **BOG Meeting #7 held on 13 January 2026**
- **BOG Meeting #8 held on 10 February 2026**
- **BOG Meeting #9 held on 10 March 2026**
- **BOG Meeting #10 held on 14 April 2026**
- **BOG Meeting #11 held on 11 May 2026**

Outline of Agenda of BOGs' Meetings

1. Financial report
2. PAOE 2025-26 updates
3. Activity report by respective Chapter Chairs
4. Reports by Kuching & Penang Sections
5. Chapter operation
6. Conference & Seminars
7. Collaboration events
8. Industry events
9. Other matters

REFRIGERANT LEAK DETECTORS

by Chew Soon Jin (Refrigeration Chair)

ARTICLE

ASHRAE Malaysia Chapter

Background

The article provides an overview of the need and application of leak detectors for cooling systems like air-conditioning and refrigeration systems. Many modern refrigerants are odorless, colorless and tasteless, and detecting refrigerants in enclosed areas such as conditioned spaces or machinery room is an important consideration for safety and operational aspects for facilities and its refrigeration system.

Per ASHRAE-15 standards, even A1 (low-toxicity, non-flammable) refrigerants should also be required to have leak detectors. This is especially so for new HFO refrigerants that's replacing HFC refrigerants as many are classified as A2L (are slightly flammable) and require further risk assessment.

Refrigerants with A3 and B3 safety classification, it should be mandatory to have a risk assessment and leak detectors installed.

Refrigerant Safety Classification

Higher Flammability	A3	B3
Flammable	A2	B2
Lower Flammability	A2L	B2L
No Flame Propagation	A1	B1
	Lower Toxicity	Higher Toxicity

Why Leak Detection?

The role of leak detection is basically to detect a leak that can occur in any conditioned space like offices, conference rooms, processing areas, or machinery room.

The idea is to detect a leak and alarm to warn occupants of potential issues such as:
a. Detect refrigerant levels in occupied spaces to prevent oxygen deprivation;
b. Minimize potential toxicity and fire hazard;
c. Early warning of leaks and minimize leakage of harmful refrigerants into the atmosphere.

If enough refrigerant leaks into occupied space, it could potentially displace the oxygen in the room and cause occupants to be asphyxiated (loss of oxygen) which can be fatal.

Why Leak Detection?

ASHRAE-15 and ASHRAE-34 Standards publishes guidelines to determine refrigerant charge limits, flammability levels and ventilation requirements such as for office spaces, open refrigerated display cases containing flammable refrigerants or machinery rooms as part of risk assessment.

The Table provides some common refrigerants showing their Safety Group with the Recommended Charge Limit and Lower Flammability Limits in grams per m^3.

While A1 refrigerants have no flame propagation, the effects of burning of many types of synthetic refrigerants can be harmful and extremely toxic.

Refrigerant	Safety Group	ODP	GWP	RCL g/m^3	LFL g/m^3
R-744	A1	0	1	54	
R-134a	A1	0	1,430	210	
R-404a	A1	0	3,943	500	
R-407F	A1	0	1,674	320	
R-507A	A1	0	3,985	510	
R-1234ze	A2L	0	1.4	76	303
R-1234yf	A2L	0	<1	75	289
R-32	A2L	0	675	77	306
R-290	A3	0	<1	9.5	38
R-600a	A3	0	3	9.5	38
R-717	B2L	0	0	0.22	116

RCL – Recommended Charge Limit
LCL – Lower Flammability Limit
Source: ASHRAE-34 Standards

Installing Leak Detectors

Leak detectors when installed and maintained correctly can help save lives. Leak detectors may be wired to activate an Alarm and/or ventilation fans to help dilute the refrigerant concentration in the room by bringing in fresh air.

Choose the correct leak detector as per system refrigerant. (eg if you're using R-134a refrigerant, choose a leak detector that is rated for R-134a). Then determine leak detection limit so that it can Alarm and/or start the ventilation fans. And decide the quantity and where to locate or place your leak detector.

It is important to understand the characteristics of each refrigerant being used. Many refrigerants are heavier than air so when a leak occurs, the refrigerant tends to stay at ground level. Ammonia is lighter than air so it stays at high levels when a leak occurs. Knowing these facts can help you position leak detectors.

Depending on the characteristics of the refrigerant in-use and quantity, there may be consideration to even shut-down the entire refrigeration system should a major leak occur and activate ventilation. Evaluate each condition at your facility.

Other Considerations

As there could be multiple leak detectors at your facility, it's always a good idea to label them and wire it into a central supervisory alarm panel. Many leak detectors today have digital displays to indicate the level of refrigerant (display of ppm (parts-per-million) and can also be integrated to your building automation system. Such displays of ppm, placed at entrances can be helpful for personnel to decide if they can enter the room safely or require PPE like SCBAs (Self-Contained Breathing Apparatus).

Leak detectors can be configured to integrate alarm and ventilation at areas to be protected or regulated. Knowing leak detection levels can help provide alarm or shut-down of refrigeration plant. So, knowing the proper ventilation rates for occupied spaces or machinery rooms can help make it safe.

In Summary

While there is no perfect refrigerant, treat ALL refrigerants with respect, understand its properties and apply it safely for your cooling and freezing systems. Installing leak detectors can make your facility safer and easier to manage but pay attention to the details for proper design. ASHRAE-15 and -34 Standards are a great resource for design information.

Upcoming Seminar and Webinar

CTTC

ASHRAE Malaysia Chapter

Year	Date	Certification Course	HRDF Claimable	*Course/Seminar*	Member (RM)	Non Member (RM)
2026	20/6			Distinguished Lecturer Seminar • Monitoring Based Commissioning and Fault Detection Diagnostics: Using Big Data and Engineering to Improve Facility Performance • Improve Energy Performance while Maintaining IEQ through Retro-Commissioning • Energy and Carbon Transition Plans: Using Audits and Retro-Commissioning to Create and Achieve your Goals	75	100
2026	22/6- 26/6	✓	✓	(Penang) Registered Energy Manager (Type 1)	3,850	5,200
2026	6/7 - 10/7	✓	✓	Registered Energy Manager (Type 1)	3,600	4,850
2026	15/7 - 16/7		✓	(Penang) Energy Efficiency Management for ACMV (SEDA)	1,600	2,150
2026	17/7 - 19/7	✓	✓	Operation & Maintenance of ACMV - Level 1	2,000	2,700
2026	7/8 - 9/8	✓	✓	Operation & Maintenance of ACMV - Level 2	2,000	2,700
2026	5/9 -7/9	✓	✓	Independent Commissioning Specialist (ICxS) Competency Course	1,850	2,500
2026	14/9 - 15/9		✓	(Johor) Basic Course of ACMV: Cooling Load Calculation & System Design	Fee to be Updated	
2026	24/9			ACE Conference at ENGINEERS	Topic & Fee to be Updated	
2026	23/10			ASHRAE - ICBE&S 2026	Topic & Fee to be Updated	
2026	2/11 - 6/11	✓	✓	Registered Energy Manager (Type 1)	3,600	4,850
2026	Dec		✓	Energy Efficiency Management for ACMV (SEDA)	1,350	1,800
2026	Jan	✓	✓	Operation & Maintenance of ACMV - Level 1	2,000	2,700
2027	March	✓	✓	Independent Commissioning Specialist (ICxS) Competency Course	2,000	2,700
2027	March	✓	✓	Registered Energy Manager (Type 1)	3,600	4,850

Upcoming Seminar and Webinar

CTTC

ASHRAE Malaysia Chapter

Upcoming Seminar and Webinar

CTTC

ASHRAE Malaysia Chapter

Upcoming Seminar and Webinar

CTTC

ASHRAE Malaysia Chapter

Upcoming events

ASHRAE Malaysia Chapter

New Publication from ASHRAE

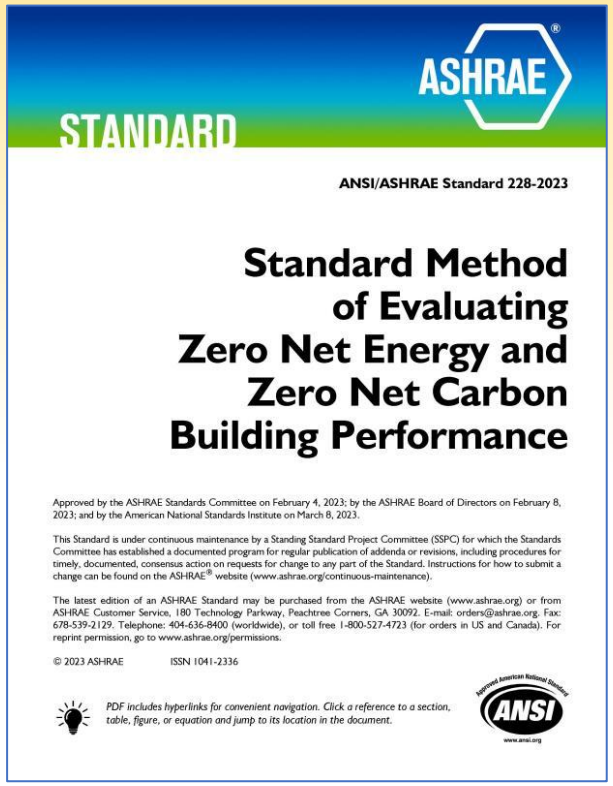
Exciting news! ASHRAE has just published the first net zero energy and net zero carbon standard, providing much-needed guidance on how buildings can achieve net zero carbon or net zero energy operations.

This groundbreaking standard addresses energy and carbon flows across the site boundary, energy sources, and even allows for individual hours of operation to be taken into account.

As sustainability becomes a top priority in the built environment, this standard sets the bar for green building practices and paves the way for a more sustainable future.

https://lnkd.in/ghDqB7S5

#myashrae
#sustainabilitymatters
#netzero
#greenbuilding
#carbonneutral
#energyefficiency


ASHRAE
STANDARD

ANSI/ASHRAE Standard 228-2023

Standard Method of Evaluating Zero Net Energy and Zero Net Carbon Building Performance

Approved by the ASHRAE Standards Committee on February 4, 2023; by the ASHRAE Board of Directors on February 8, 2023; and by the American National Standards Institute on March 8, 2023.

This Standard is under continuous maintenance by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the Standard. Instructions for how to submit a change can be found on the ASHRAE® website (www.ashrae.org/continuous-maintenance).

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PDF includes hyperlinks for convenient navigation. Click a reference to a section, table, figure, or equation and jump to its location in the document.

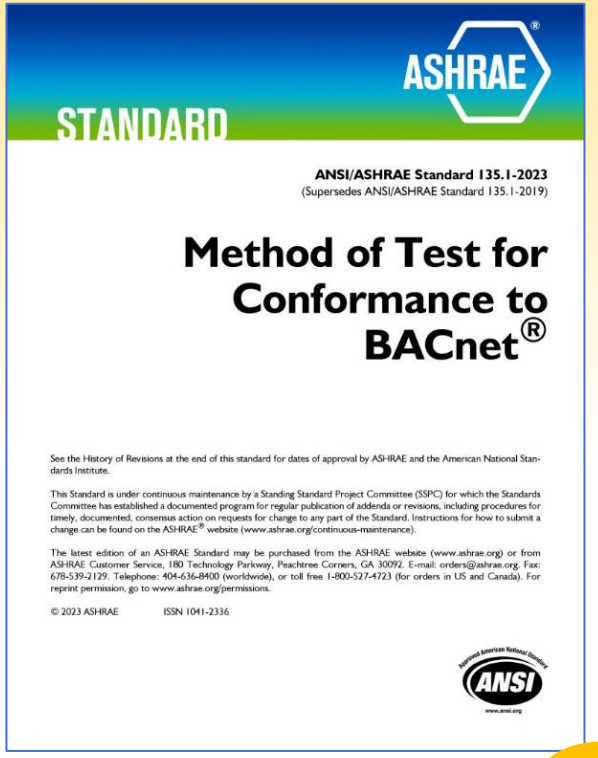
ANSI

ASHRAE Announces 2023 Update to BACnet Method of Test!

ANSI/ASHRAE Standard 135.1-2023 provides procedures and tools for validating equipment for conformance with ASHRAE Standard 135 (BACnet).

Learn more and grab your copy at https://bit.ly/3FEpmhe!

#myashrae


ASHRAE
STANDARD

ANSI/ASHRAE Standard 135.1-2023
(Supersedes ANSI/ASHRAE Standard 135.1-2019)

Method of Test for Conformance to BACnet®

See the History of Revisions at the end of this standard for dates of approval by ASHRAE and the American National Standards Institute.

This Standard is under continuous maintenance by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the Standard. Instructions for how to submit a change can be found on the ASHRAE® website (www.ashrae.org/continuous-maintenance).

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ANSI

New Publication from ASHRAE

ASHRAE Standard 241 establishes minimum requirements for controlling infectious aerosols and reducing the risk of disease transmission in new and existing buildings. Included are requirements for both outdoor air system and air cleaning system design, installation, commissioning, operation, and maintenance to reduce exposure to infectious aerosols.

ASHRAE/ACCA Standard 211 establishes consistent practices for conducting and reporting energy audits for commercial buildings.

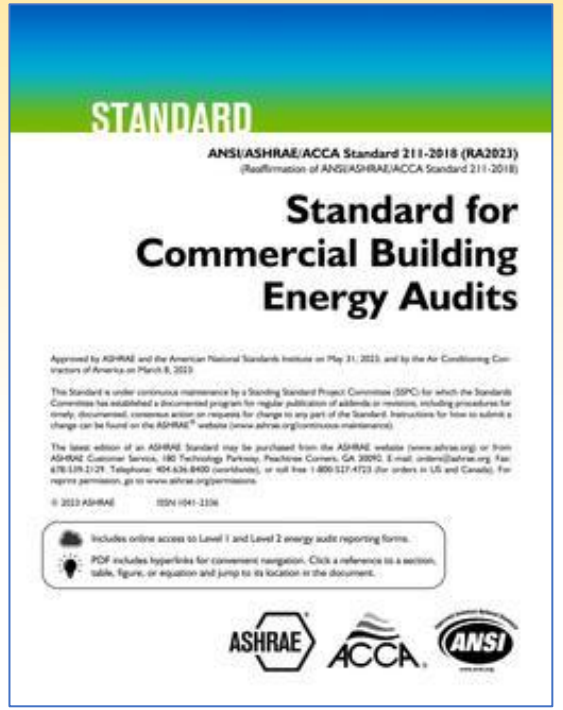
The 2023 reaffirmation of Standard 211 includes a new Informative Appendix H that establishes consistent practices for conducting and reporting building-level decarbonization assessments for building-related Scope 1 and 2 greenhouse gas (GHG) emissions.

The assessment:

* Builds on an ASHRAE level 1 or 2 energy audit, with additional evaluation of options to reduce or eliminate on-site fossil fuel emissions, reduce refrigerant emissions, and promote use of on-site renewable energy

* Develops a timeline for measure implementation that may consider trigger events such as capital plans for equipment replacement, occupancy c turnover, mandated GHG emission limits, market availability of new technologies, and electricity grid improvements

* Determine achievable levels of emission reductions at a building through energy efficiency, electrification, fugitive emissions reduction, and on-site renewable energy



ASHRAE AND CIBSE RECIPROCAL MEMBERSHIP AGREEMENT (Link)

ASHRAE and the Chartered Institution of Building Services Engineers (CIBSE), has a reciprocal membership agreement designed to broaden the knowledge of engineers and engineering organizations. Under the agreement, full Members and ASHRAE members without professional engineering licenses are eligible to join CIBSE without undergoing the normal qualifications review into the appropriate CIBSE member grades. Likewise, all CIBSE members can join without undergoing ASHRAE's admissions and advancement review.

The reciprocal membership agreement was created in 2007. Since that time over 130 ASHRAE members have joined CIBSE, and over 150 CIBSE members have joined ASHRAE.

Reciprocal Membership Arrangement Includes:

- Access to the widest combined source of technological information and services relevant to building services (HVAC&R) that are based on global, industry accepted documents, standards, and guidelines
- Provide improved opportunities for international member to member liaison
- Access a wider range of technical and educational information that provides a more comprehensive international understanding
- Contribute, and benefit from, focused shared publication development
- Opportunity to participate as a full member in technical groups and committees in both organisations
- Provide ready-made conduit for young engineers to discover the global reach of engineering
- CIBSE YEN and ASHRAE YEA Potential to move forward to jointly supported projects
- Fast-tracking (and waived processing fees) of membership applications for selected membership grades within CIBSE

Ready to Join CIBSE?

ASHRAE members who are interested in joining CIBSE can learn more about the CIBSE ASHRAE Route to Membership.

Ready to Join ASHRAE?

CIBSE members that want to join ASHRAE fill out the join form.

Please email membership@cibse.org if you have any questions or would like further information

ASHRAE - Update on New Refrigerants Designations and Safety Classifications (Link to download PDF file)

EVENTS & NEWS

ASHRAE Malaysia Chapter

UN environment programme

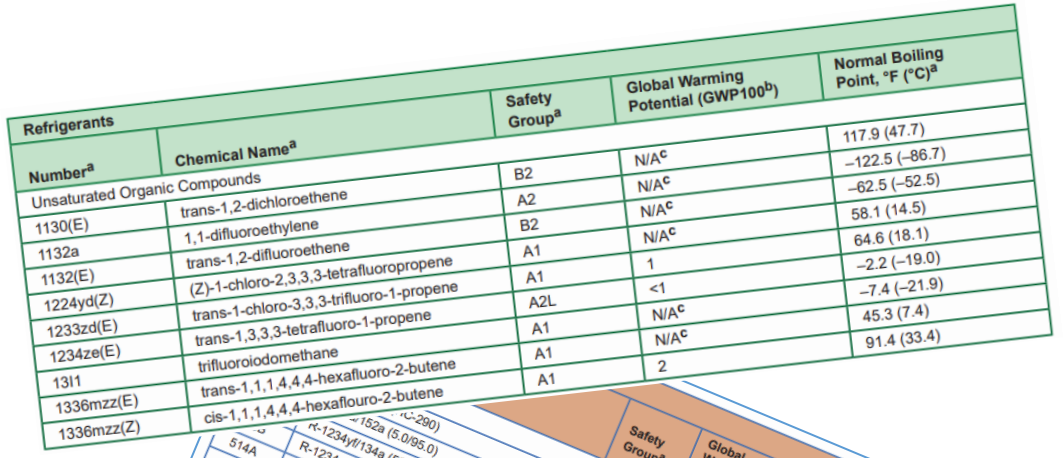
ASHRAE

FACTSHEET 1

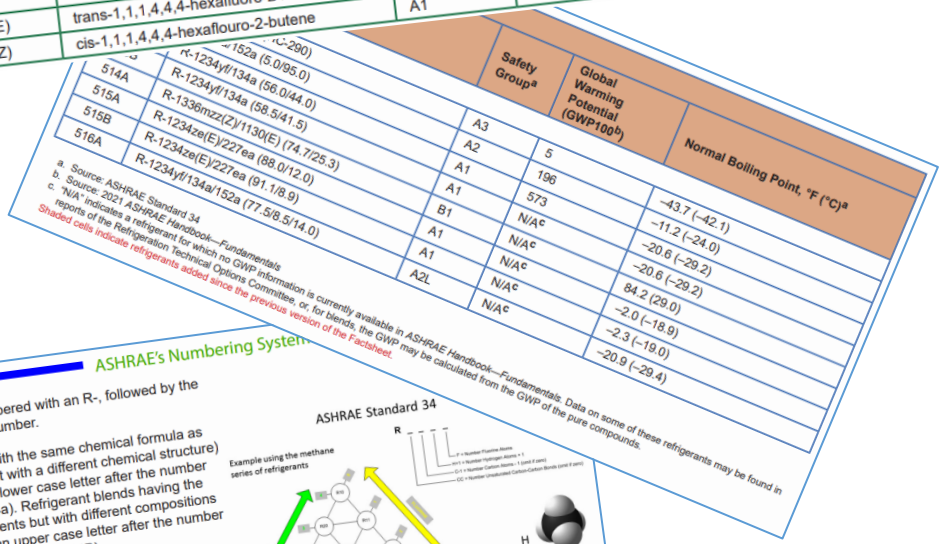
Update on New Refrigerants Designations and Safety Classifications

February 2024

The purpose of this fact sheet is to provide an update on ASHRAE standards for refrigerants and to introduce the new refrigerants that have been awarded an «R» number over the last few years and introduced into the international market.

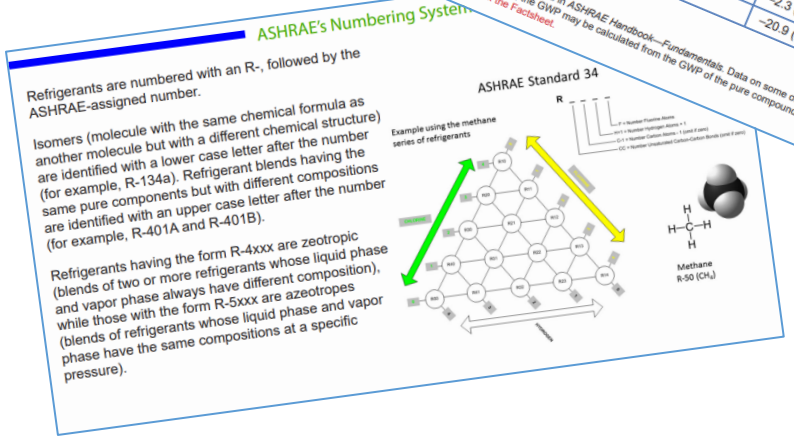


Refrigerants		Safety Group[a]	Global Warming Potential (GWP100[b])	Normal Boiling Point, °F (°C)[a]
Number[a]	Chemical Name[a]			
Unsaturated Organic Compounds				
1130(E)	trans-1,2-dichloroethene	B2	N/A[c]	117.9 (47.7)
1132a	1,1-difluoroethylene	A2	N/A[c]	–122.5 (–86.7)
1132(E)	trans-1,2-difluoroethene	B2	N/A[c]	–62.5 (–52.5)
1224yd(Z)	(Z)-1-chloro-2,3,3,3-tetrafluoropropene	A1	N/A[c]	58.1 (14.5)
1233zd(E)	trans-1-chloro-3,3,3-trifluoro-1-propene	A1	1	64.6 (18.1)
1234ze(E)	trans-1,3,3,3-tetrafluoro-1-propene	A2L	<1	–2.2 (–19.0)
13I1	trifluoroiodomethane	A1	N/A[c]	–7.4 (–21.9)
1336mzz(E)	trans-1,1,1,4,4,4-hexafluoro-2-butene	A1	N/A[c]	45.3 (7.4)
1336mzz(Z)	cis-1,1,1,4,4,4-hexaflouro-2-butene	A1	2	91.4 (33.4)



		Safety Group[a]	Global Warming Potential (GWP100[b])	Normal Boiling Point, °F (°C)[a]
513A	R-1234yf/134a (56.0/44.0)	A1	573	–11.2 (–24.0)
514A	R-1336mzz(Z)/1130(E) (74.7/25.3)	B1	N/A[c]	–20.6 (–29.2)
515A	R-1234ze(E)/227ea (88.0/12.0)	A1	N/A[c]	–20.6 (–29.2)
515B	R-1234ze(E)/227ea (91.1/8.9)	A1	N/A[c]	84.2 (29.0)
516A	R-1234yf/134a/152a (77.5/8.5/14.0)	A2L	N/A[c]	–2.0 (–18.9)

a. Source: ASHRAE Standard 34
b. Source: 2021 ASHRAE Handbook—Fundamentals
c. "N/A" indicates a refrigerant for which no GWP information is currently available in ASHRAE Handbook—Fundamentals. Data on some of these refrigerants may be found in reports of the Refrigeration Technical Options Committee, or, for blends, the GWP may be calculated from the GWP of the pure compounds.
Shaded cells indicate refrigerants added since the previous version of the Factsheet.



ASHRAE's Numbering System

Refrigerants are numbered with an R-, followed by the ASHRAE-assigned number.

Isomers (molecule with the same chemical formula as another molecule but with a different chemical structure) are identified with a lower case letter after the number (for example, R-134a). Refrigerant blends having the same pure components but with different compositions are identified with an upper case letter after the number (for example, R-401A and R-401B).

Refrigerants having the form R-4xxx are zeotropic (blends of two or more refrigerants whose liquid phase and vapor phase always have different composition), while those with the form R-5xxx are azeotropes (blends of refrigerants whose liquid phase and vapor phase have the same compositions at a specific pressure).

ASHRAE Standard 34

R

Example using the methane series of refrigerants

Methane
R-50 (CH_4)

What do we have at ASHRAE The 90.1 Portal?

LIBRARY & RESOURCES

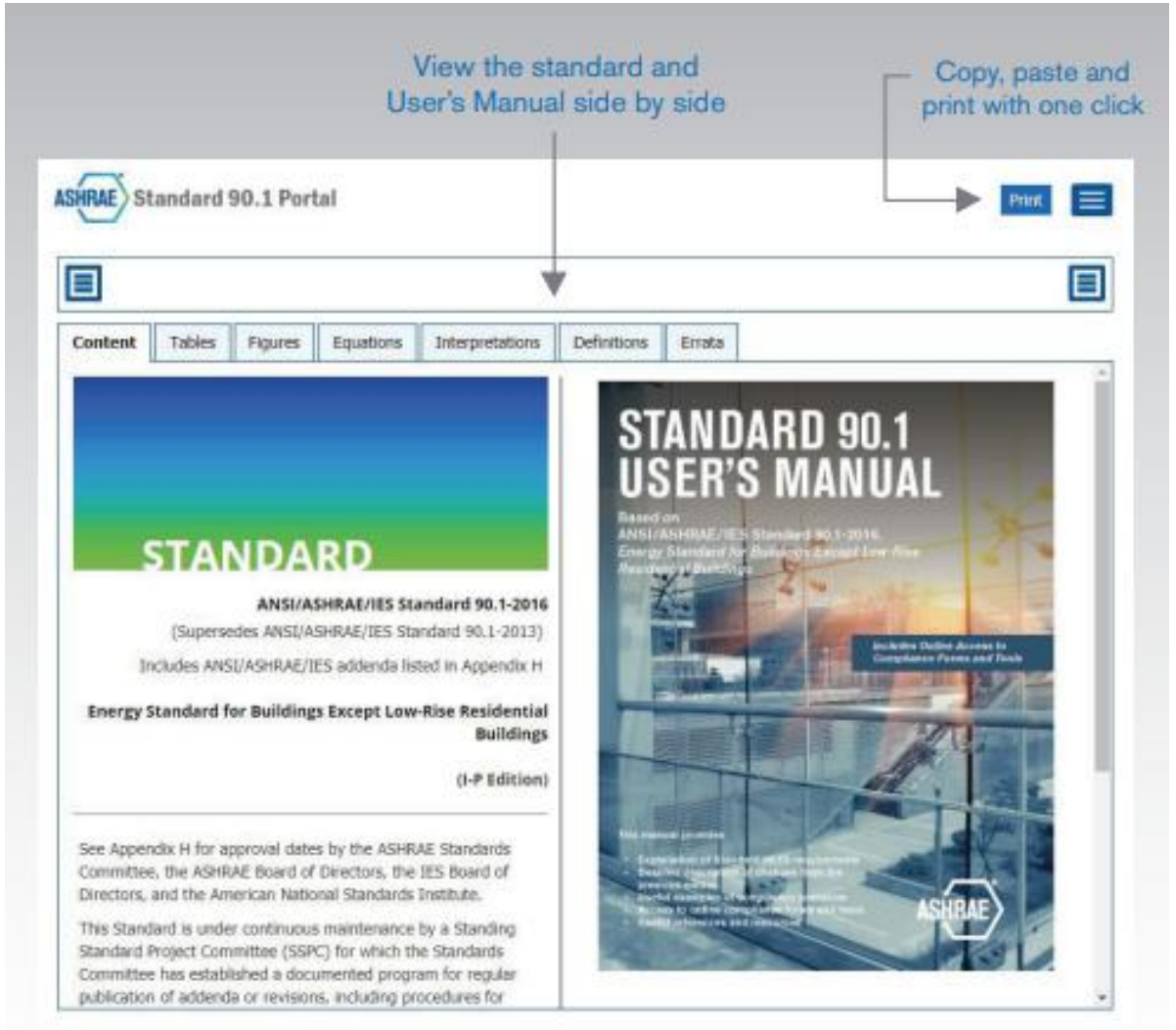
ASHRAE Malaysia Chapter

As at the 31st May 2024:

ASHRAE's 90.1 Portal is on hiatus pending a redesign, expansion, and relaunch at an undetermined future date. We look forward to soon providing 90.1 and more to you bigger and better than ever.

To purchase copies of any edition of ANSI/ASHRAE/IES Standard 90.1 or its User's Manual, visit the ASHRAE Bookstore by clicking on the links below and scrolling down for historical editions:

- ANSI/ASHRAE/IES Standard 90.1-2022 (I-P units edition)
- ANSI/ASHRAE/IES Standard 90.1-2022 (SI units edition)
- Standard 90.1-2019 User's Manual (dual units)



Online Reading-Only-Version of Latest ASHRAE Publications is Available Now! (1/2)

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[Click this link to access to the online "Read-Only-Versions" of ASHRAE Standards & Guidelines]

Guidelines Available:

- Guideline 1.4-2019, Preparing Systems Manuals for Facilities
- Guideline 11-2021, Field Testing of HVAC Control Components
- **Guideline 12-2023, Managing the Risk of Legionellosis Associated with Building Water Systems** [Latest Version]
- Guideline 28-2021, Air Quality within Commercial Aircraft
- Guideline 29-2019, Guideline for the Risk Management of Public Health and Safety in Buildings
- Guideline 36-2021, High-Performance Sequences of Operation for HVAC Systems

Standards Available:

- Standard 15-2022, Safety Standard for Refrigeration Systems
- Standard 34-2022, Designation and Safety Classification of Refrigerants
- Standard 52.2-2017, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size
- **Standard 55-2023, Thermal Environmental Conditions for Human Occupancy (ANSI Approved)** [Latest Version]
- Standard 62.1-2022, Ventilation for Acceptable Indoor Air Quality
- Standard 62.2-2022, Ventilation and Acceptable Indoor Air Quality in Residential Buildings
- Standard 84-2020, Method of Testing Air-to-Air Heat/Energy Exchangers (ANSI Approved)
- Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings (I-P version)
- Standard 90.2-2018, Energy Efficient Design of Low-Rise Residential Buildings

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Standards Available:

- Standard 100-2018, Energy Efficiency in Existing Buildings
- Standard 111-2008 (RA 2017)-- Testing, Adjusting, and Balancing of Building HVAC Systems
- Standard 135-2020, BACnetTM A Data Communication Protocol for Building Automation and Control Networks
- **Standard 140-2023, Method of Test for Evaluating Building Performance Simulation Software** [Latest Version]
- Standard 154-2022, Ventilation for Commercial Cooking Operations
- Standard 170-2021, Ventilation of Health Care Facilities
- Standard 180-2018, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems (ACCA Co-sponsored)
- Standard 183-2007 (RA 2020), Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings
- Standard 185.2-2020, Method of Testing Ultraviolet Lamps for Use in HVAC&R Units or Air Ducts to Inactivate Microorganisms on Irradiated Surfaces
- Standard 188-2021, Legionellosis: Risk Management for Building Water Systems [Latest Version]
- Standard 189.1-2020, Standard for the Design of High-Performance Green Buildings
- Standard 202-2018 , Commissioning Process for Buildings and Systems
- **Standard 211-2018 (RA2023), Standard for Commercial Building Energy Audits**
- **Standard 224-2023 -- Standard for the Application of Building Information Modeling (ANSI Approved)** [Latest Version]
- **Standard 241-2023, Control of Infectious Aerosols** [Latest Version]

Newly Added

Newly Added

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ASHRAE Malaysia Chapter

ASHRAE Technology Portal

ASHRAE Technology Portal is your one-stop location for ASHRAE papers, articles, reports, Handbook PDFs, and seminar recordings. ASHRAE Members have free access to download ASHRAE Journal articles and ASHRAE Research Reports. ASHRAE Transactions and Conference Papers and seminar recordings from ASHRAE conferences are also available to Members and nonmembers by subscription.

ACCESS PORTAL

For more information about ASHRAE Technology Portal, please contact 1-800-527-4723 or technologyportal@ashrae.org.

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Resources Free for Everyone

Design Guidance for Education Facilities: Prioritization for Advanced Indoor Air Quality, Version 2.0

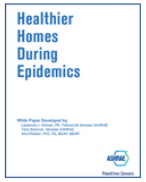
Newly Added

This document provides guidance to owners, operators, designers, and professional service providers on how to best implement indoor air quality (IAQ) improvements, including risk mitigation strategies, in educational facilities. It will also help facilitate discussion between designers and stakeholders, identify minimum recommendations, and discuss further considerations to improve IAQ and reduce the transmission risk of infectious pathogens and other contaminants of concern. This document will be updated to further align with developing information. It is not intended to replace or supersede other documents, including, but not limited to, other standards such as ANSI/ASHRAE Standard 62.1 or the proposed ASHRAE Standard 241. Instead, this guidance is intended to illustrate principles and practical considerations within the existing framework to mitigate risk. HVAC professionals should use this guidance in conjunction with all relevant bylaws, codes, and standards.

ASHRAE HVAC&R Global Summit Final Report: The ASHRAE Global HVAC&R Summit – a key element of 2022–2023 ASHRAE President Farooq Mehboob's vision for his Society year theme, "Securing Our Future" – was designed to create an environment of collaboration and strategic dialogue to address the critical issues of the day, which were determined via the results of an international survey developed and distributed by the ASHRAE Associate Society Alliance (AASA).

LEARN MORE

Healthier Homes During Epidemics



Preparing your home in advance can help you, your family, and other household members stay physically and mentally healthy during an outbreak. This white paper describes strategies for protecting household members from infection and for isolating those who develop the infectious disease or have a high risk of severe outcomes if they become infected. This paper also describes the supplies you might need, the information you should gather about your home and its heating and cooling systems, and other actions you can take before or during an outbreak to minimize your household's risk of illness.

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Resources Free to Members Only

Chapter Promotion Supplies

Use this form to request brochures, greeting cards, stickers, and other ASHRAE Logo materials to help promote your Chapter.

Chapter Promotion Supplies Request Form

Membership Promotion Materials

These materials are available free to you as an ASHRAE member for use in membership promotion. Includes brochures and other materials to help you promote ASHRAE Membership.

Membership Materials

ASHRAE Technology Portal

The ASHRAE Technology Portal is a Membership Resource that requires Member Login for Access.
Non-ASHRAE members may browse the portal and choose to purchase items.

Enter the Portal

CAMEE

Tools from CAMEE, free for Members. Available for purchase by non-ASHRAE members for $60 each.
Engineering Practice Tools

Commissioning Definitions and Terminology for the Building Industry: A Common Overview

Commissioning Definitions and Terminology for the Building Industry: A Common Overview is a joint effort between ASHRAE, AiCAAR and CIBSE to standardize terminology related to commissioning. This resource is an important step in improving building performance through improved communication and consistent, globalized terminology to improve collaboration among building technology professionals.

What do we have at ASHRAE eLearning?

ASHRAE Learning Institute

eLearning

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Why ASHRAE eLearning?

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11-19 users	15% Off Member Price
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For more information contact elearning@ashrae.org or 678-500-3917

SmartStart Program for Graduate Member

smartstart program
graduate. transfer. succeed.

What is the SmartStart program?
Simply put, it's the best way for ASHRAE student members to receive the many benefits of Associate grade membership after finishing college. SmartStart is a 3 year program that allows Student members to transfer to Associate grade membership at a rate that is recent-graduate friendly.

Prices as of July 1, 2020: SmartStart participants who join or renew after this date will be part of the new dues structure. Participants who only paid for one year upon transferring their membership will renew based on this new dues structure. New program prices are (for 3 years respectively): $25 (+) $85 (+) $115= $225 for 3 years.

The Developing Economies pricing ($15 + $45 + $60 = $120) is open to those residing in countries considered to be "Low Income" & "Lower Middle Income" by the World Bank. Visit the World Bank's Web site for a list of low income /lower middle income countries.

By submitting this application you are agreeing to abide by the ASHRAE Code of Ethics, found at ashrae.org/codeofethics.

Please note that the SmartStart program is for current ASHRAE Student members who have been a Student member for at least one year.

Why Transfer to Associate Membership?

List of Associate Membership Benefits: -

- **Dedicated events and resources** for young professionals are offered at the chapter and Society level through the Young Engineers in ASHRAE (YEA) program.
- Tremendous **networking opportunities** through chapter events, committee participation, volunteering, attending conferences, and more.
- **The ASHRAExChange** – participate in the online forum that brings together members from across the world to discuss design, construction, operation, and support of the built environment.
- **The ASHRAE Handbook** — the indispensable, industry-wide resource for all HVAC&R professionals.
- **ASHRAE Journal** — this monthly resource is the most trusted technical magazine in the HVAC&R community.
- **High Performing Buildings** — the quarterly magazine for innovation in building technology design and operation.
- **HVAC Industry News** — a weekly news resource keeping ASHRAE members abreast of the latest industry news.
- **Bookstore** — Access to, and discounts on, more than 300 of the industry's **leading technical publications**.

ASHRAE Membership Benefits (Part 1 of 2)

MEMBERSHIP PROMOTION

ASHRAE Malaysia Chapter

Renew your ASHRAE membership today at ashrae.org/renew.

(Continued to next page)

ASHRAE Membership Benefits (Part 2 of 2)

MEMBERSHIP PROMOTION

ASHRAE Malaysia Chapter

Additional Member Benefits by the Numbers

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&

25% discount On **400** publications in the Bookstore

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2000+ free resources for members in the ASHRAE Technology Portal

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&

7 ASHRAE Certifications

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