



**ASHRAE
&
United Nations Environment Programme**

**2024/2025 Biennial Work Plan
of the ASHRAE-UNEP Global Cooperation Agreement**

1. ASHRAE and UNEP, through its OzonAction Programme, signed a cooperation agreement in 2007 aiming to achieve several global environmental and technical goals within the mandate of both organizations including, but not limited to, the goals of reducing refrigerants emissions; maximizing climate benefits in selecting alternative refrigerants, building the capacities of different HVAC&R stakeholders and facilitate the transfer and adoption of suitable technologies in developing countries.
2. The agreement calls for establishing a work plan to address the specific technical priorities and emerging issues. This is the sixth in a series of joint work plans developed under ASHRAE-UNEP Cooperation Agreement and managed through a joint Liaison Working Group established by both sides to implement cooperative activities between both parties.
3. **The 2024 / 2025 Work Plan** is thematically designed under the theme of “**Refrigerant Management for Climate Protection and Energy Efficiency in Developing Economies.**” The plan’s emphasis will be on deploying all the developed tools and programs for sound management of refrigerants, how they impact energy efficiency, and to make them available and accessible to different stakeholders in developing countries.
4. Two Main Tracks are the basis of the 2024 / 2025 Work Plan Refrigerant Management for Climate Protection and Energy Efficiency in Developing Countries:
 - Track-A:** Deploy ASHRAE-UNEP products and tools for effective outreach.
 - Track-B:** Support evolving developing country needs through ASHRAE-UNEP services.

5. Implementing these tracks assists the government and the refrigerating and air-conditioning industry by developing:
 - Up-to-date information about new alternative technologies entering the marketplace;
 - Channels such as learning tools, reference works, and events that enable technology transfer about new technology applications and safety issues;
 - Capacity building to achieve enhanced environmental performance;
 - Workforce enhancement by expanding awareness of career opportunities among a diverse group of employment candidates.
6. In agreeing to this Work Plan, ASHRAE and UNEP are working collaboratively to implement their respective mission statements: Respectively, to benefit humanity by advancing the arts and sciences of heating, ventilating, air conditioning, and refrigeration and to assist developing countries comply with the Montreal Protocol. Both ASHRAE and UNEP recognize the value of sharing resources to implement environmentally beneficial technology choices and strengthen infrastructure capacity to support technology adoption and application.
7. This Work Plan will be implemented through multi-track programs that offer different types of activities and allow extended engagement amongst relevant stakeholders in developing countries.
8. Details of the 2024 / 2025 workplan including the specific planned activities and products for each track are as follows:

Track A: Deploy ASHRAE-UNEP Products and Tools for Effective Outreach

1. Promotion

- ACTIVITIES:

a) Refrigerant Management for Future Engineers University Course

- (1) Collect and analyze scheduling data and satisfaction (See Feedback and Evaluation Section).
- (2) Co-brand course and provide access through UNEP and ASHRAE networks.
- (3) Develop Promotional campaign for learning institutes exploring train-the-trainers support, utilizing eLearning content, etc.

b) eCourses

- (1) Evaluate Refrigerant Literacy demand, if warranted process for updating, and promotion. (See Feedback and Evaluation Section)
- (2) Complete Energy Efficiency Literacy update, promote, and translate.
- (3) Evaluate Sound Management of Refrigerants for continued use. (See Feedback and Evaluation Section)
- (4) Regularly review enrollment and completion reports and explore alternative uses of e-Courses, such as linked with University Course or Face-to-Face adaptation. (See Feedback and Evaluation Section)

- (5) Evaluate e-course delivery methodology to determine if there is a better way or additional way to deliver the courses.
- c) **ASHRAE-UNEP Lower GWP Innovation Award:**
 - (1) Design and conduct a promotion campaign for the next cycles through ASHRAE chapters and National Ozone Units
 - (2) Review the structure of the Award, criteria, and list of judges after completing the ongoing cycle.
- d) **RAC Technology Factsheets:** Explore the development of Technology Factsheets to complement the Refrigerants Update. Candidates include the role of building codes in refrigerant transition, energy efficiency, how RAC systems work, and thermal comfort.
- e) **RAC Assessment Guide**
 - (1) Complete guide in Guidance Sheets and Poster formats.
 - (2) Pilot guide with 2-3 countries in cooperation with local ASHRAE chapters and NOUs (National Ozone Units) in accordance with Stage II of the Scoping Document, incorporating recommendations.
 - (3) Organize an international event to present the new guide once completed.
- f) **Joint Research Projects:** Explore the potential for engaging in joint technology research, including identifying gaps in information needs in developing countries, gap analysis, and process for research.

2. Feedback and Evaluation

ACTIVITIES:

- a) **Client/User Satisfaction Surveys:** Conduct regular client satisfaction surveys collecting feedback about all products and tools being offered openly for individuals or institutions.
- b) **Follow-up Campaigns:** Conduct a communication campaign with all registrants to the e-courses to ensure successful course completion and provide technical backstopping in case of problems faced in accessing and completing the courses.
- c) **Feedback Events:** Organize special sessions for the ASHRAE Chapters, NOUs and Energy Officers to solicit feedback about the usefulness and relevance of ASHRAE-UNEP tools, products, and services.

3. Update & Upgrade

- ACTIVITIES:

- a) **Update:** Institute formal review resulting in updates as needed for all tools and products at least once every three years to ensure reflection of the dynamics of global policies and industry and technology
- b) **Upgrade:** All products should be reviewed for the opportunity to be used in new and/or blended formats. For example:
 - (1) Convert the e-courses into Face-2-Face versions and make them accessible to ASHRAE chapters and NOUs with a “how-to-use” guidance as well as a suggested list of lecturers.
 - (2) Incorporate e-courses into the existing University Course, making the completion of an e-course a pre-requisite of the University Course, or using an e-course within the University Course instruction.

- (3) Explore online and offline formats for the RAC Assessment Guide, including the development of a point-based assessment tool based on the guide's checklists.
 - (4) Investigate how fact sheets can be developed for use in the ASHRAE UNEP Portal and online products for mobile devices that can be used by technicians and others.
- c) **ASHRAE-UNEP Portal:** Maintain and update the ASHRAE UNEP portal at www.ashrae.org as the focal point for updated jointly developed products and tools and as a resource of current information about joint activities.

Track B: Support evolving developing country needs through ASHRAE-UNEP Services

1. Local Partnership Points of Communication

- **ACTIVITIES:** Establish structure and process for UNEP National Ozone Units to access experienced RAC technology practitioners from industry (product engineers, system designers and assessors, operators, researchers and technicians). The process would be organized at a regional level within UNEP and ASHRAE but executed at a national level with ASHRAE chapters and NOUs.

2. International Events

ACTIVITIES: Explore the potential for strategic engagements in ...

- a) **ASHRAE Specialty Conferences:** ASHRAE organizes themed conferences such as on decarbonization and developing economies. Opportunities for UNEP engagement that be explored include organization of UNEP-themed sessions, speaker slots, branding, and participation on organizing committees.
- b) **UN Conferences:** The United Nations organizes conferences for countries that have joined the United Nations Framework Convention on Climate Change (COP) and Meetings of the Parties to the Montreal Protocol (MOP). Opportunities for ASHRAE engagement that can be explored include participation of ASHRAE experts on UNEP's Refrigeration, Air-Conditioning, and Heat Pumps Technical Options Committee (RTOC) and ASHRAE attendance at UNEP's Energy Efficiency Workshop and planning joint side events at COP and MOP meetings to promote our tools and educational offerings.
- c) **Regional Events:** Regional conferences and other events organized through ASHRAE's regional structure enable effective regional participation possibilities with UNEP. UNEP and ASHRAE can join each other's regional events to improve communication between NOUs and UNEP regional officers and ASHRAE volunteers regionally and nationally. This can also include special UNEP ASHRAE jointly organized events on a specific mutual regional need.
- d) **Global Alliances:** Discuss opportunities where each organization can participate in programs, plans, and initiatives organized by or participated in by the other party that are focused on aligning the RAC industry to address global issues related to refrigerant transition, climate protection, and energy efficiency.

- e) **Support Presence at International Events and Meetings.** Participation supports the deployment and successful outreach of products, tools, and services and provides opportunity for future planning.

3. **Work Force Development Including Gender Mainstreaming**

ACTIVITIES

- a) Participate and support INWIC as founding members such as mentoring, participation of working groups,
- b) Offer opportunities to women in RAC to take part in ASHRAE-UNEP activities, functions, and groups.
- c) Review work force development and diversity/inclusion resources that each organization makes available to identify opportunities for further joint development and promotion.

4. **World Refrigeration Day**

ACTIVITIES

- a) Work on a joint campaign annually with UNEP and other UNEP partners to raise awareness of how the RAC industry is moving to offer and apply alternative technologies for climate security.
- b) Support WRD activities, in general, to draw attention to the men and women who control indoor environments for human comfort and industry in ways that protect the environment while minimizing energy use.

5. **Refrigerant Driving License**

ACTIVITIES

- a) Participate and support the RDL as a member of the RDL Advisory group.
- b) Encourage ASHRAE chapters to support the adoption of certification and other workforce qualification programs to advance the practice of RAC technologies.


9. The above suggested tools, products, and services shall be implemented within the existing programs and workplan of both partners, that is, ASHRAE and UNEP-OzonAction, without entailing unplanned fiscal impact to any partner unless mutually agreed and contracted through specific legal instrument.

10. The ASHRAE-UNEP Liaison Working Group will work on developing an operational implantation plan for each activity under this workplan that has been mutually agreed upon to move forward, including the following elements as needed for specific activities:

- a) Scope of work and ultimate outputs
- b) Target groups and stakeholders
- c) Final format and accessibility
- d) Specific deliverables
- e) Fiscal impact and source of funding
- f) Timeline of implementation and expected date of launch
- g) Role of ASHRAE (committees/staff) vs. UNEP (team/experts)
- h) Other partners and supporting entities

11. The official channels of communication between ASHRAE and UNEP shall be maintained through the instated ASHRAE-UNEP Liaison Working Group which shall coordinate and liaise relevant communications, collect feedback and send updates to different ASHRAE or UNEP regional teams in relation to all types of activities within this workplan.
12. This workplan can be modified or amended by written agreement between both parties and as needed during the implementation period of January 2024 through December 2025 notwithstanding any internal clearance or review process of each partner.

For UNEP OzonAction



James S. Curlin
Head of UNEP OzonAction

22 JANUARY 2024
Date

For ASHRAE



Ginger Scoggins
ASHRAE President

1-22-24
Date