



High Ambient Temperature Forum Shows Promise and Challenges for Path Ahead

The greatest challenge faced by the Parties to the Montreal Protocol in recent years is determining how to promote a transition away from the use of high-global warming potential (GWP) hydrofluorocarbons (HFCs) as alternatives to ozone-depleting substances. A number of countries have expressed concerns regarding the feasibility of beginning this transition at the same time they are attempting to complete the phase-out of ozone-depleting substances. They have cautioned that refrigeration and air-conditioning (RAC) equipment using low-GWP alternative refrigerants may not deliver the same performance or energy efficiency as the HCFC-22 units currently in use in the high ambient temperature conditions experienced within their borders. Concerned that energy resources are limited, those countries have been apprehensive about restricting possible choices for the future by advancing policies to limit access to high-GWP HFCs.

In response, a number of key entities, including the United Arab Emirates Ministry of Environment and Water (MEOW); the Emirates Authority for Standardization and Metrology (ESMA); the UN Environment Programme (UNEP); the UN Industrial Development Organization (UNIDO), the Air-Conditioning, Heating and Refrigeration Institute (AHRI) and ASHRAE-Falcon Chapter began a series of workshops to explore this issue. After using four previous workshops to define the challenge, the entities held their fifth workshop in Dubai on October 31, 2015 in the margins of the Montreal Protocol Meeting of the Parties. There the entities reviewed the work of several distinct efforts to assess the performance of RAC equipment utilizing next-generation, low-GWP alternative refrigerants. Those programs include an update on ASHRAE's efforts to classify new refrigerants and develop new safety requirements for mildly flammable refrigerants, an international testing effort based in the US government's Oak Ridge National Laboratory, AHRI's initiative on low-GWP alternative refrigerants evaluation program, AREP-II, and the UNEP-UNIDO-led High Ambient Project, PRAHA.

- While each of these efforts addressed a separate element of the future of the RAC sector in countries with high ambient temperature conditions, as a whole they show that ***substantial progress is being made to develop viable solutions for use in high ambient temperature conditions.***
- As diligently as industry has worked to bring low-GWP solutions to the market, ***broad commercialization cannot occur until the regulatory, code and standard bodies authorize their use.***
- ***The government of Kuwait and the UAE were early voices in calling attention to this special regional challenge and were right to draw the attention of industry and policymakers to this important element of implementing a transition to lower-GWP alternatives.*** Industry and its partners in government have been working steadily to address and resolve this challenge in the intervening years.
- ***Once governments fully authorize the use of low-GWP refrigerant solutions and provide a clear market signal, then commercial availability will escalate.*** Future refrigerant decisions will be made by balancing multiple factors such as availability, energy efficiency, safety and cost.
- ***Integral to achieving the transition is the need to focus on the training and education of those storing and handling alternative refrigerants as well as maintaining and repairing the equipment they are used in.***

Industry is committed to working with countries experiencing high ambient temperature conditions to develop an energy efficient path forward that allows their RAC sectors to continue to promote comfortable, productive lives.

“We have a good record as an industry in advancing technology solutions,” said AHRI CEO and President Steve Yurek. “We must continue to work together to ensure that next generation HVAC products reduce HFC emissions while addressing performance in high ambient temperature climates.”