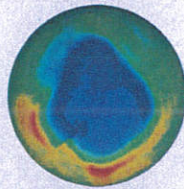


Protecting our Ozone Layer and Climate System through Responsible Refrigeration Management in Indian Country

Impacts of Refrigerant Emissions

Emissions of certain refrigerants – including chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) found in refrigeration and air conditioning equipment - destroy the ozone layer. The ozone layer provides the Earth with a protective shield from the sun's harmful ultraviolet (UV) radiation. A thinner ozone layer allows more UV radiation to reach the Earth's surface. Overexposure to UV radiation can cause a range of health effects, including skin and eye damage, and suppression of the immune system.



Antarctic ozone hole

In addition, to harming the ozone layer, these ozone-depleting substances (ODS) – as well as their non-ozone depleting alternatives like hydrofluorocarbons (HFCs) – are potent greenhouse gases (GHG) that contribute to climate change. Therefore reducing emission of ODS and their alternatives have important implications for protecting the environment and human health.

Protecting Our Ozone Layer and Climate System:

Over the past several decades, the U.S. EPA and its partners have made significant strides to protect the Earth's stratospheric ozone layer, the climate system, and people's health. EPA carries out our implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer to phase out the production and consumption of ODS. EPA also has established programs under the Clean Air Act (CAA) to guide the transition to safer alternatives, and reduces emissions of refrigerants from refrigeration and air conditioning equipment.



Air conditioning and refrigeration technicians play an important role in protecting the ozone layer and climate system. Certification programs provide technicians with important information on required practices that reduce emissions of damaging substances.

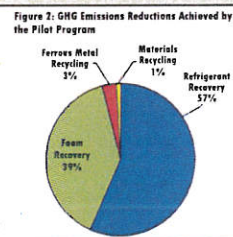
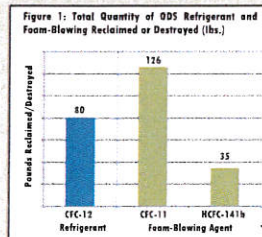
Reducing Emissions in Indian Country:

Evaluating your tribe's servicing and disposal practices may help you to identify opportunities to achieve greater ozone layer and climate protection. The following projects may serve as useful examples of how your tribe can improve refrigerant management practices.



Refrigerators and Freezers

In 2009, EPA's Responsible Appliance Disposal (RAD) Program partnered with the Yakama Nation to conduct a small-scale refrigerator/freezer recycling pilot program. Proper disposal of old, inefficient refrigerators and freezers minimizes the release of ODS, GHGs, and other harmful substances, such as PCBs and mercury. By preventing the release of refrigerant and foam-blowing agent into the environment, an estimated 250 lbs. of ODS emissions were avoided (Figure 1). The disposal of 192 appliances during pilot program resulted in GHG emissions reductions of 717 metric tons of carbon dioxide equivalent (Figure 2). This is equivalent to approximately 137 cars not driven for one year.



Stationary Refrigeration and Air Conditioning

In 2010, EPA provided stationary refrigeration and AC training and certification at the Tribal Lands Forum in San Diego, CA. EPA staff coordinated a hands-on refrigerant recycling training. This training can improve servicing and disposal practices, reduce release of refrigerants into the atmosphere, and encourage recapture and recycling of used refrigerant.

Technicians servicing stationary refrigeration and AC systems must be certified under Section 608 of the Clean Air Act.

Motor Vehicle Air Conditioning

In 2013, EPA partnered with the Morongo Band of Mission Indians to provide motor vehicle air conditioning servicing training and certification to technicians from six tribes in California and Arizona. This training can help prevent ODS and HFC refrigerant releases during the servicing and disposal of MVACs and MVAC-like appliances and encourage recapture and recycling of used refrigerants.

Technicians servicing motor vehicle air conditioning systems must be certified under Section 609 of the Clean Air Act.

How Can You Improve Your Tribe's Refrigerant Management?

- Is illegal dumping a concern in your community?
- Does your community properly dispose of or recycle their old refrigerators, air conditioners, and vehicles?
- Do your technicians have access to refrigerant recovery and recycling equipment and know how to use it?
- Do your technicians have access to refrigerant reclamation and appliance destruction services?
- Are your technicians Section 608 and 609 certified?
- Are there other ways EPA can help tribes achieve better refrigeration management?
- What can your tribe share to help EPA?



For more information please visit epa.gov/ozone

