Guest Commentary

Offset projects from ODS destuction: more than meets the eye

By Joel Levin, vice president of business development for the Climate Action Reserve

The Montreal protocol is one of our great unsung environmental success stories. Over the past 22 years, it has enabled us to avoid truly catastrophic damage to the environment from stratospheric ozone depletion. It has also already resulted in four times more benefit to the climate than the Kyoto protocol targets, according to an article by Guus Velders in the Proceedings of the National Academy of Sciences. However, for some years now, the Montreal protocol signatories have been struggling to fix a big hole in the treaty.

The Montreal protocol entered into force in 1989. It was designed to eliminate a family of gases that was creating a hole in the earth's stratospheric ozone layer. These various gases are lumped together under the term ODS—ozone-depleting substances. The ODS gases are also significant drivers of climate change, although this was not the primary concern of the Montreal protocol.

Compared to the complex and long-term impacts of climate change, the science on environmental damage from ozone depletion is clear and immediate. Increased ultraviolet radiation leads to increased skin cancer, cataracts, decreased agricultural productivity, and harm to plants and animals. Australia, New Zealand, Chile and Argentina are suffering these impacts now. Had the Montreal protocol not come into effect 22 years ago, the effects would be far more severe and widespread.

After gradually ratcheting down over time, production of CFCs (chlorofluorocarbons) which are among the most potent ODS, was effectively banned last year on a global basis. However, significant quantities of these gases are still in widespread use. In the United States, CFC refrigerants recovered from appliances and other equipment being taken out of service are typically recycled for reuse in operating systems. Given typical leakage rates, more than 90 per cent of CFC refrigerants will end up in the atmosphere within the next 10 years, causing significant harm from both an ozone and climate change perspective.

However, eliminating the banks of ODS turns out to be a lot harder than banning production. They are difficult and expensive to destroy, requiring extremely high temperatures or other sophisticated destruction technologies. In countries where destruction has been mandated (or reuse prohibited), much of the ODS is actually vented or transported to places where it can be legally reused.

Enter offset projects and the carbon market. GHG markets now provide an incentive to collect and destroy CFC refrigerants and other eligible ODS that would otherwise be released to the atmosphere. Moreover, qualified destruction facilities, such as hazardous waste incinerators in the United States are already closely regulated by the Environmental Protection Agency. There is no risk of gaming (a la Chinese HFC projects) or questions regarding additionality because there is no new production and negligible amounts of ODS that would otherwise be destroyed. Every pound of ODS destroyed is reducing the load that would find its way into the atmosphere over the next decade.

The Climate Action Reserve has now issued more than 3.5 million CRTs for ODS projects. The state of California also recognizes the benefits of ODS projects. They are one of only four project types yet approved by the state for its offset program under AB 32. The United Nations has also begun to seriously examine the carbon market as a mechanism for cleaning up ODS banks, an important hole that remains in the structure of the Montreal protocol.

The public remains broadly skeptical of industrial gas destruction projects. People mistrust what they cannot see, and the bad taste from dubious HFC projects under the CDM remains. But the tremendous carbon benefits and ozone co-benefits from these projects are clear. They are highly additional, straightforward to measure, and they deserve our strong support.