PUR GREATER ACTION THROUGH THE MONTREAL PROTOCOL

Context and objectives

Phasing down hydrofluorocarbons (HFCs) presents a significant opportunity for the next administration. HFCs are the fastest-growing greenhouse gases in the U.S. and are being emitted annually at a rate exceeding the equivalent of 150 million metric tons of CO$_2$, or about 40 coal-fired power plants.

A global agreement, the Kigali Amendment to the Montreal Protocol, has been struck to phase down these super pollutants, which are commonly used in cooling appliances such as air conditioners and refrigerators. The U.S. signed the pact in 2016 but has not yet ratified it. The administration has the opportunity to quickly give notice that it plans to ratify the Kigali Amendment, something that could be done within the first 100 days as a show of commitment to climate action. Doing so would be appropriate alongside an announcement to rejoin the Paris Agreement.

Phasing down HFCs is relatively straightforward considering the size of the climate benefits. The relevant industry has worked for over a decade to bring viable alternatives to market. The Kigali Amendment is in force internationally, and HFC phasedown supporters have been developing a plan to implement it in the U.S. for several years now. The plan, currently consolidated into a bill, builds on thirty years of successful policy under the Clean Air Act to transition these industries to less environmentally harmful substances.

Perhaps best of all, support for the HFC phasedown is extremely broad-based, with stakeholder groups as disparate as environmentalists and manufacturing industries in support. Most of the regulated industry is promoting the Kigali Amendment because they have invested significantly in replacing HFCs with climate-friendlier technologies and because it will create a harmonized regulatory framework for their products worldwide.

Priority strategies

Mitigating HFC emissions quickly and effectively can be focused around four priority strategies:

1) Join the Kigali Amendment swiftly;
2) Begin the HFC phasedown and expand regulations on HFCs;
3) Appropriate funds for HFC mitigation; and
4) Consider a longer-term push to regulate N$_2$O under the Montreal Protocol and related laws.

Join the Kigali Amendment swiftly

The administration should quickly announce its intent to ratify the Kigali Amendment. It is the most significant political act on HFCs the U.S. can take and one that’s years overdue. The U.S.
was the primary champion of the agreement, and our silence hangs over the treaty’s future like a cloud. Obligations will begin as soon as we ratify; they would’ve begun in 2019 had we joined the agreement by then.

Ratification will require the advice and consent of the Senate, so there may be a time delay prior to ratification becoming effective. During this period, the administration may declare to the Montreal Protocol that is joining the Kigali Amendment “provisionally” – a construct set forth in the agreement’s legal text for this very purpose – but that should be a temporary holdover. It will also be important to judge ratification’s political prospects in the Senate prior to submission. We expect they will be good: thirteen Republican Senators sent a letter to President Trump urging his administration to submit the amendment for ratification. Supportive members of industry have also been lobbying Senators for years in favor of ratification.

The administration should work with other major economies that have yet to ratify the agreement, particularly China, India, and Brazil. Until those countries ratify, and the U.S. does, the huge emissions reductions potential of the Kigali Amendment will be unsecured. The Kigali Amendment is expected to avert at least 0.24 – 0.44°C of warming globally in 2100, capping total HFC-driven emissions to just 0.06°C.

Begin the HFC phasedown and expand regulations on HFCs

The administration should roll out an EPA-led domestic HFC phasedown program in lockstep with formally completing the ratification process. This critical step will establish the actual U.S. phasedown and allow the U.S. to comply with the HFC control measures it accedes to by ratifying the agreement.

The domestic HFC phasedown is thought to require new legislation. To this end, bipartisan legislation was introduced and heard by committees in both chambers in the 116th Congress – H.R. 5544 and S. 2754. NRDC and the regulated industry worked with committee staff to draft the bills, which are substantively nearly identical (although the House version is better-drafted) and constitute an enactment-ready package that has been vetted by every major stakeholder including EPA. It is possible that the bill will be enacted prior to the end of this Congress but, if not, the administration should promptly champion it with confidence.

In the meantime, EPA should issue rules shoring up prior regulations under the Significant New Alternatives Policy (SNAP) Program and the Refrigerant Management Program that were partially or fully rolled back under the Trump Administration. In 2017 the D.C. Circuit court partially reversed EPA’s two major regulations prohibiting several worst-of-their-kind HFCs in specified uses and in 2020 the administration finalized a regulation undoing handling and maintenance requirements for HFCs. The administration should urge EPA to reinstate and strengthen these requirements to the maximum extent practicable.
The administration should also instruct EPA to consider ways to reduce emissions from HFC “banks,” a reference to all the HFCs already installed and in use in equipment and products across the country. HFC banks are believed to amount to 2-3 gigatons of CO₂e in the U.S. alone, so putting requirements in place to recover, recycle, or properly destroy those HFCs has big potential benefits. EPA should also quantify the size of HFC stockpiles amassed in the lead-up to the Kigali Amendment (i.e. during the four-year period of inaction under the Trump Administration). Reliable information on stockpiled HFC supply will provide a basis to more aggressively restrict new HFC production. These efforts should be national at first, but the administration should consider advancing similar initiatives at the Montreal Protocol to improve international work in these areas, too.

The administration should also encourage EPA to work with other agencies to set forth federal procurement requirements calling for use of climate-friendly alternatives to HFCs. The administration should also help other entities, such as leadership states, procure climate-friendlier equipment in bulk to speed up market growth for next-generation technologies.

**Appropriate funds for HFC mitigation**

Funding for HFC mitigation is an important piece of the administration’s contribution to the Kigali Amendment and also the ongoing phaseout of ozone-depleting substances. The funding level during the last three years of the Trump administration has been about $37 million per year. The U.S. pays into the Montreal Protocol annually based on an internationally-agreed three-year replenishment level, the latest iteration of which will be negotiated in late 2020. The administration should make sure it stays up to date and pays the annual installments in full, and include bonus funds as opportunity arises. EPA also receives $4-5 million for domestic implementation of the Stratospheric Protection Division, which should be maintained and increased as needed.

The administration should also rejoin and fund the Climate and Clean Air Coalition, a short-lived climate-pollutant-oriented conglomerate of nations and organizations working to reduce HFC emissions.

**Consider a longer-term push to regulate N₂O under the Montreal Protocol and related laws**

For a decade nitrous oxide has been the world’s largest source of stratospheric ozone-damaging emissions. Its ozone depletion potential is comparable, although slightly smaller, than the predominant HCFCs the world is working hard, and spending billions, to phase out completely. N₂O also has significant global warming potential; scientists estimate that we can avoid 20 gigatons CO₂e of warming through 2060 if we take concerted global action to mitigate (but not eliminate) N₂O emissions.

Controlling N₂O under the Montreal Protocol would require mounting a multi-year campaign of international political influence. Whereas HFCs are used as substitutes to the ozone-depleting gases the Montreal Protocol originally set out to eliminate, N₂O is used for wholly other
purposes in industries outside the core expertise of the Montreal Protocol community. For this reason, the administration should not begin actually pursing this campaign effort until the Kigali Amendment is ratified and EPA is well on its way to implementing its core requirements. That said, an N₂O initiative at the Montreal Protocol perhaps represents the best future prospect of climate and ozone protection for the world’s most reliable environmental treaty, with potential to knock off another one of the six major greenhouse gases like HFCs before it.

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1 This section is based upon input from the following individuals (section leads are noted with an asterisk and additional contributors are listed in alphabetical order): Alex Hillbrand (Natural Resources Defense Council)*; and David Doniger (Natural Resources Defense Council). The views reflected in this document are not intended to be consensus perspectives and do not reflect the views of the individuals’ organizations.