

March 19, 2024

Suzanne Hagell, PhD
Bureau Chief, GHG Mitigation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-1030

By Electronic Mail

RE: Comment on Part 494 HFC

Dear Dr. Hagell,

My name is John Ketcham, and I am a fellow and director of cities at the Manhattan Institute, located in New York City.* I write to you respectfully to express reservations about the New York Department of Environmental Conservation's (DEC) proposed amendment to 6 NYCRR Part 494 regarding hydrofluorocarbon (HFC) use.

Though the proposed amendment's intent is admirable, its adverse consequences on New York's residents and businesses outweigh its putative environmental benefits. According to the U.S. Energy Information Administration, New York has long been at or near the bottom of states in terms of emissions and energy consumption per capita.¹ Each New Yorker's energy-related CO₂ emissions amount to just 7.9 metric tons (mt) annually, a fraction of that produced by populous states like Texas (22.4 mt) or Pennsylvania (16.4 mt).² Producing one million dollars of state GDP requires under 250 metric tons of CO₂ in New York, less than half of states like Florida, Texas, and California.³ New York's total HFC emissions, of around 9.32 million metric tons of CO₂e (calculated using UN accounting),⁴ represent a mere 0.142% of the approximately 6,341 million metric tons of total U.S. CO₂-equivalent emissions in 2022 estimated by the U.S. Environmental Protection Agency.⁵ These achievements result largely from New York City's environmentally friendly dense multifamily housing, extensive public transit system, and advanced service-based economy.⁶

* The Manhattan Institute does not take institutional positions on legislation, rules, or regulations. Although my comments draw upon my research as an Institute scholar, the views represented today are solely my own, not my employer's.

¹ See U.S. Energy Information Administration, *New York State Energy Profile*, (Dec. 21, 2023), <https://www.eia.gov/state/print.php>.

² See U.S. Energy Information Administration, *Per capita energy-related carbon dioxide emissions by state (1970–2021)*.

³ Kristian Blickle, Rajashri Chakrabarti, & Maxim Pinkovskiy, *Transition Risks in the Fed's Second District and the Nation*, LIBERTY STREET ECONOMICS OF FEDERAL RESERVE BANK OF NEW YORK (Nov. 9, 2023), <https://libertystreeteconomics.newyorkfed.org/2023/11/transition-risks-in-the-feds-second-district-and-the-nation/>.

⁴ NYDEC, REGULATORY IMPACT STATEMENT 6 NYCRR PART 494, HYDROFLUOROCARBON STANDARDS AND REPORTING 7 (2023).

⁵ UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, DRAFT INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2022 ES-4 (2024).

⁶ See, e.g., David Owen, *The Greenest Place in the U.S. May Not Be Where You Think*, YALE ENVIRONMENT 360, (October 26, 2009).

Therefore, the most important environmental principle New York can adopt is to encourage more people to live, work, raise families, and do business in the state. Policies that raise the cost of living and doing business in New York necessarily cut against that principle, diverting economic and population growth to places with far higher per-capita greenhouse gas (GHG) emissions. Southern states, for example, require air conditioning for a far greater portion of the year, consequently increasing the risk of HFC emissions. According to the latest census data, New York City has lost 546,146 residents since 2020, often to jurisdictions in the South.⁷ Counties in Texas, Florida, Georgia, and North and South Carolina were among the largest population gainers between July 2022 and July 2023.⁸

For this reason, I oppose the proposed amendment's § 494-1.4(f) prohibitions on bulk refrigerants. Abruptly curtailing the supply of these refrigerants—as early as January 1, 2025 for R-410a, one of the most common refrigerants in residential and commercial HVAC systems—will increase the cost of repairing and maintaining refrigeration and HVAC units. For lower- and middle-income families in the downstate area already struggling with some of the nation's highest living costs, this prohibition will likely add to their economic burdens.

These proposed restrictions seem incongruous with years of New York State efforts to eliminate oil- and natural gas heating systems in exchange for electric air-source and ground-source (geothermal) heat pump systems. Heat pump systems use refrigerants affected by the proposed amendment, commonly R-410a.⁹ New York State's "Clean Heat" program, for example, provides rebates for residential utility customers who add air-source and ground-source heat pumps, with additional funds for those who decommission (remove) their fossil-fuel heating systems.¹⁰

After years of incentive programs encouraging New York residents to switch to electric heating systems—and touting their environmental benefits—DEC's proposed amendment will make it harder and more expensive to maintain those same systems because of their environmental *harms*. This suggests that the proposed amendment is arbitrary and capricious.

Many New Yorkers have participated in these incentive programs in recent years, and thousands more have purchased equipment with their own hard-earned income. They were no doubt motivated, at least in part, by the vaunted environmental benefits of upgrading and retrofitting their fossil-fuel heating systems to the latest high-efficiency HVAC technology.

If the proposed amendment's prohibition on bulk refrigerants takes effect, many of these owners will surely be disillusioned to discover that they cannot obtain the refrigerant necessary to

⁷ E.J. McMahon, *Slowdown in outflow, but no robust rebound in latest NY population estimates*, EMPIRE CTR. BLOG, (Mar. 15, 2024), <https://www.empirecenter.org/publications/slowdown-in-outflow-but-no-robust-rebound-in-latest-ny-population-estimates/>.

⁸ *Id.*

⁹ See, e.g., Casey Crownhart, *Everything you need to know about the wild world of heat pumps*, MIT TECH. REV. (Feb 14, 2023), <https://www.technologyreview.com/2023/02/14/1068582/everything-you-need-to-know-about-heat-pumps/>.

¹⁰ CON EDISON, NEW YORK STATE CLEAN HEAT, CON EDISON HEAT PUMP PROGRAM MANUAL, VERSION 4, MARCH 1, 2024 10 (2024), https://cleanheat.ny.gov/assets/pdf/Con%20Edison%20Program%20Manual%203_1_24.pdf.

maintain and repair their systems at a reasonable price. Heating and cooling systems leak known average percentages of their refrigerant annually through normal operations. Post-prohibition, the exorbitant cost of adding needed refrigerant will encourage owners to replace their system well before its useful life. This forced and unnecessary obsolescence of still-viable air conditioning and heating equipment will needlessly cause waste and, in turn, environmental harm. Making the perfect the enemy of the good in this way again suggests arbitrariness and capriciousness.

Some R-410a-based equipment owners will likely feel duped by the state's decision to limit the repairability of what it previously subsidized. Their desire for greater certainty will encourage them to return to fossil fuel-based heating systems (if still legally permissible at that time), cutting against years of the state's electrification efforts.

The abrupt transition will also hinder refrigeration and HVAC professionals from receiving adequate safety and technical training for alternative low GWP refrigerants. Some of these alternative refrigerants are flammable, such as R-290 (propane) and other hydrocarbon blends, necessitating special training. They generally operate under far higher pressures than today's conventional refrigerants and are not widely used in the United States. Fewer properly trained technicians will further increase labor-based repair costs for New York residents and businesses.

I further oppose the proposed amendment's § 494-2.8, the Food Chain Refrigerant Replacement Program. If implemented, it will acutely and unnecessarily raise costs on New York's food distributors and supermarkets. Food businesses will be required to replace refrigeration and HVAC equipment—very often in good working condition and potentially purchased recently—with expensive new systems. As the proposed amendment's regulatory impact statement states, “In most cases, the affected equipment will need to be replaced before the 2035-2040 timeline proposed in this rule. In the event that equipment is relaced [*sic*] early, the upfront costs are expected to be high.”¹¹

These increased costs will also place New York businesses at a competitive disadvantage relative to their counterparts in states with less restrictive environmental regulations. Considering the essential role that refrigeration and HVAC systems play in many industries, this will impede the state's economic growth and divert economic activity to other, less regulated areas of the country.

New York's food manufacturers, distributors, and retailers will almost surely attempt to pass on the regulation's costs to consumers through higher prices. Because food items are necessities, consumers cannot opt to avoid paying additional regulatory costs by refusing to buy these firms' products.¹² For this reason, the restrictions on new refrigeration equipment will, starting January 1, 2025, raise the cost of food and other necessities. Again, this will impact low- and middle-income New York families hardest.

¹¹ NYDEC, *supra* note 4, at 33.

¹² See, e.g., MARGO BERGMAN, UNIVERSITY OF WASHINGTON PRESSBOOKS MICROECONOMICS FOR MANAGERS: 26. ELASTICITY AND TAXES (2020) (“If demand is more inelastic than supply, consumers bear most of the tax burden, and if supply is more inelastic than demand, sellers bear most of the tax burden.”).

Finally, I oppose the proposed amendment because it is unnecessary, considering the EPA's transition timeframe to low Global Warming Potential refrigerants.¹³ Simply adopting rules that match the federal government's timeframe would not place New York's residents and businesses at a relative disadvantage to those in other states. The proposed amendment should therefore be changed to align with the federal government's standards.

In sum, as written, the proposed amendment to 6 NYCRR Part 494 will likely raise costs on residents and businesses, potentially driving them out of already environmentally friendly New York. Wherever they go, they will almost invariably produce more GHGs—including through HFC emissions—than if they had simply stayed in New York. Because the proposed Part 494 HFC amendment may plausibly lead to these adverse results, it should not be implemented.

Sincerely,

A handwritten signature in cursive script that reads "John Ketcham".

John Ketcham
Fellow and Director of Cities
Manhattan Institute

¹³ See, e.g., U.S. EPA, *Frequent Questions on the Phasedown of Hydrofluorocarbons*, (Feb. 9, 2024), <https://www.epa.gov/climate-hfcs-reduction/frequent-questions-phasedown-hydrofluorocarbons>.