



May 7, 2019

The Honorable Julie Moore
Secretary
Vermont Agency of Natural Resources
1 National Life Drive
Davis 2
Montpelier, VT 05620

Dear Secretary Moore,

In response to Senate passage of Senate Bill 30, and as the state considers specific measures to reduce the use of hydrofluorocarbons (HFCs), the undersigned organizations and companies write to encourage Vermont, whether by regulation or legislation, to prohibit uses of HFCs consistently with similar regulations in California and Washington and in progress in New York, Connecticut, and Maryland. The undersigned entities represent manufacturers, chemical producers and environmental organizations, and we support a harmonized regulatory framework for reducing hydrofluorocarbon use in states such as Vermont.

With minor modifications as shown in the attached appendix, the transitions adopted in California and under consideration elsewhere are based on the 2015 and 2016 US EPA Significant New Alternatives Policy (SNAP) rules concerning the use of high global warming potential (high-GWP) HFCs.¹ Prohibitions on HFCs consistent with California and other states will give industry the certainty it needs as it continues to invest, plan, and act to transition away from high-GWP HFCs. We look forward to working with Vermont as it considers these measures.

In March 2018, the California Air Resources Board adopted an agency regulation for new refrigeration equipment that implemented the majority of the HFC prohibitions in SNAP Rules 20 and 21. By 2030, this regulation will help realize 80 percent of California's anticipated emissions reductions under SNAP Rules 20 and 21.² Subsequently, Governor Brown signed California's Senate Bill 1013, passed by supermajority, which will phase out several other major HFC uses in EPA's SNAP Rules 20 and 21 following similar transition dates but with minor modifications. In April 2019, the Washington state legislature enacted a bill adopting SNAP-like regulations, including most of those in the attached appendix.

This coalition supports the above transition approach. There should be no new labeling, reporting, or recordkeeping requirements for products mandated by law or relevant mandatory

¹ 80 Fed. Reg. 42,870 (July 20, 2015) ("SNAP Rule 20"); 81 Fed. Reg. 86778-86895 (Dec. 1, 2016) ("SNAP Rule 21")

² Public Hearing to Consider the Proposed Regulation for Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration and Foam End-Uses, Staff Report: Initial Statement of Reasons pg. 35, California Air Resources Board, January 30, 2018.



safety standards to label the propellant, refrigerant and/or foam blowing agent used in the manufacture of the product.

We support efforts in Vermont to adopt prohibitions on HFCs in ALL end-uses and dates as established by US SNAP Rules 20 and 21, with the minor modifications shown in the attached appendix.

The states should adopt prohibitions consistent with those defined in Appendix B, Appendix U and Appendix V of Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, with the modifications in the attached appendix, which would adjust the transition dates for household refrigerators and freezers to be consistent with dates adopted by California and Washington. Vermont should prohibit sale, lease, rent or entry into market of any equipment or product leading to the use of any prohibited substance based on the date of manufacture.

Regulations that provide certainty for the transition to low-GWP HFC alternatives will help benefit the environment. This framework will help ensure a reasonable manufacturing transition for the undersigned companies and help consumers realize the benefits of next generation products.

Sincerely,

Association of Home Appliance Manufacturers (AHAM)
The Natural Resources Defense Council (NRDC)
Chemours Company
Honeywell International Inc.

APPENDIX: Prohibitions on the Use of Certain HFCs

	End use	Substitutes	Prohibition Effective Date	
		Aerosol Products		
	Propellants	HFC-125, HFC-134a, HFC-227ea and blends of HFC-227ea and HFC-134a.	1-Jan-20	
		Foam Blowing Agents		
Rigid polyurethane applications and spray foam	Rigid Polyurethane (PU) and Polyisocyanurate Laminated Boardstock	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof.	1-Jan-20	
	Rigid Polyurethane Slabstock and Other	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, and Formacel Z-6.	1-Jan-20	
	Rigid Polyurethane Appliance Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, and Formacel Z-6.	1-Jan-20	
	Rigid Polyurethane Commercial Refrigeration and Sandwich Panels	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, and Formacel Z-6.	1-Jan-20	
	Rigid Polyurethane Marine Flotation Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, and Formacel Z-6.	1-Jan-20	
	Rigid PU high-pressure two-component spray foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC-365mfc with at least four percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; and Formacel TIa.	1-Jan-20	
	Rigid PU one-component foam sealants	HFC-134a, HFC-245fa, and blends thereof; blends of HFC-365mfc with at least four percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; and Formacel TIc.	1-Jan-20	
	Flexible Polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof.	1-Jan-20	
	Integral Skin Polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, and Formacel Z-6.	1-Jan-20	
	Flexible PU foam	Methylene chloride	1-Jan-20	
Polystyrene applications	Polystyrene Extruded Sheet	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, and Formacel Z-6.	1-Jan-20	
	Polystyrene Extruded Boardstock and Billet (XPS)	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel B, and Formacel Z-6.*	1-Jan-21	
	Polyolefin	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6.	1-Jan-20	
	Phenolic Insulation Board and Bunstock	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof.	1-Jan-20	
	Rigid PU low-pressure two-component spray foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC-365mfc with at least four percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; and Formacel TI.*	1-Jan-21	
		Food Refrigeration Equipment		
	Supermarket Systems (New)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	1-Jan-20	
	Supermarket Systems (Retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	1-Jan-20	
	Remote Condensing Units (New)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	1-Jan-20	
	Remote Condensing Units (Retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	1-Jan-20	
	Stand-Alone Units (Retrofit)	R-404A, R-507A	1-Jan-20	
Stand-alone units	Stand-Alone Medium-Temperature Units with a compressor capacity below 2,200 Btu/hour and not containing a flooded evaporator (New)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	1-Jan-20	
	Stand-Alone Medium-Temperature Units with a compressor capacity equal to or greater than 2,200 Btu/hour and Stand-Alone Medium-Temperature Units containing a flooded evaporator (New)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	1-Jan-20	
	Stand-Alone Low-Temperature Units (New)	HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	1-Jan-20	
	Vending Machines (New)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-426A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), SP34E	1-Jan-20	
	Vending Machines (Retrofit)	R-404A, R-507A	1-Jan-20	
	Retail food refrigeration – refrigerated food processing and dispensing equipment (new)	HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	1-Jan-21	
	Household refrigerators and freezers (new)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, and THR-03	1/1/2021 for consumer compact refrigerators, refrigerator-freezers and freezers 1/1/2022 for consumer refrigerators, refrigerator-freezers, freezers and miscellaneous refrigeration products** 1/1/2023 for consumer built-in refrigerators, refrigerator-freezers and freezers **	
	Cold storage warehouses (new)	HFC-227ea, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-423A, R-424A, R-428A, R-434A, R-438A, R-507A, and RS-44 (2003 composition)	1-Jan-23	
			Stationary Air Conditioning Equipment	
		Centrifugal chillers (new)	FOR12A, FOR12B, HFC-134a, HFC-227ea, HFC-236fa, HFC-245fa, R-125/134a/600a (28.1/70/1.9), R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-423A, R-424A, R-434A, R-438A, R-507A, RS-44 (2003 composition), and THR-03	1-Jan-24
	Positive displacement chillers (new)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R-125/134a/600a (28.1/70/1.9), R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-424A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 composition), SP34E, and THR-03	1-Jan-24	
		Motor Vehicle Air Conditioning Equipment		
	New Light-Duty Systems	HFC-134a, R-406A, R-414A (HCFC Blend Xi, GHG-X4), R-414B (HCFC Blend Omicron), HCFC Blend Delta (Free Zone), Freeze 12, GHG-X5, HCFC Blend Lambda (GHG-HP), R-416A (FRIGC FR-12, HCFC Blend Beta), SP34E, R-426A (RS-24, new formulation)	Model Year 2021	

*If the United States Environmental Protection Agency approves a previously prohibited hydrofluorocarbon blend with a global warming potential of 750 or less for foam blowing of polystyrene extruded boardstock and billet and rigid polyurethane low-pressure two-component spray foam pursuant to the Significant New Alternatives Policy Program under Section 7671(k) of the federal Clean Air Act (42 U.S.C. Sec. 7401 et seq.), the department/agency shall expeditiously initiate a rulemaking to conform the requirements established under this section with that federal action.

** The effective dates for these products reflect the dates set out in CA Senate Bill 1013.