Testimony
of

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Before
the

Environment & Public Works Committee

U.S. Senate Hearing
on

American Innovation and Manufacturing Act (S. 2754)

April 8, 2020

Chairman Barrasso, Ranking Member Carper, and members of the Committee, thank you for the opportunity to provide written testimony regarding the American Innovation and Manufacturing Act (S. 2754). DuPont appreciates the Committee reviewing this legislation and that Congress is taking action to create a federal program for the phase-down of hydrofluorocarbons (HFCs).

DuPont supports a harmonized regulatory framework for reducing HFCs through a phase-down approach, consistent with the intention of this bill. This timely, urgent, and much needed legislation has the opportunity to offer businesses certainty and predictability, which is especially important for companies with operations throughout the United States, such as ours.

While DuPont supports the general approach that S. 2754 is taking, the legislation, as currently drafted, puts DuPont's energy-efficient insulation products at risk, as the bill does not align state HFC programs to the federal program it creates. We believe that the proposed legislation in S. 2754 has the opportunity to create an effective HFC phase-down while providing certainty by promoting alignment with state programs. We look forward to working with the Committee towards this goal.

Overview of our business & products:

DuPont Performance Building Solutions (PBS) is an integrated business unit within DuPont's Safety & Construction business that was formed in June 2019 when Dow and DuPont's construction businesses merged. PBS commercializes a variety of building envelope products including thermal insulation and air sealing products and technologies which improve the energy efficiency performance of buildings.

HFCs are a limited but critical ingredient required in the manufacturing process of our foam insulation products, which include extruded polystyrene Styrofoam™ Brand Insulation (XPS) and two component low pressure spray polyurethane foam (2K-LP SPF) insulation and sealants Froth-Pak™ Brand. **These two foam product categories are small users of HFC compared with the overall HFC market. It is estimated that these foam types comprise less than 3% of the total HFC volume in California,** a statistic that could be extrapolated to give a sense for the miniscule scale of HFC user within a much broader market.

These DuPont products are manufactured in multiple sites across the US and Canada to serve both of those markets. It is proven that once applied in the built environment, these products save far more Greenhouse Gas (GHG) emissions than their manufacturing footprint, making our products have a net-positive GHG benefit. Manufacturing in closer proximity to the point of sale also improves our products' GHG emissions profile related to transportation.

It is important to note that while the various foam products commercialized today may seem similar to the consumer, these products can have extremely different performance attributes, product requirements and manufacturing processes based on their intended end use. A white foam disposable cup that is colloquially called "Styrofoam" is in reality a very different product from ours: expanded polystyrene (EPS). EPS has a very different manufacturing process and product performance characteristics compared with DuPont's high performing XPS building insulation product which is colloquially called "Blue Board," and trademarked Styrofoam™.

Given the diversity of foam products in the market, including foam in appliances, cars, building insulation, product and food packaging, it should not be surprising that the foam industry has a variety of needs. Many foam types did not require HFCs to begin with or have already found alternatives. **In the case of our two end uses, the blowing agents we use greatly impact all characteristics of the finished product, including thermal value, compressive strength, and**

flammability. We do not yet have a cost-effective, viable alternative that meets our product performance needs, required building fire codes and material performance, as well as the other necessary product requirements such as long term compressive and flexural strength for in service and retail shelf life.

DuPont collaborates with other companies, non-profits, and industry partners to promote progressive policies and standards such as energy efficient and resilient building codes on a local, state, and national level. Unfortunately, states are referencing the EPA prohibition lists as a regulatory mechanism at a point in time in which there was a limited basket of blowing agent options approved for our end use. **The uncertainty of more than 20 pending state programs with overly aggressive HFC phase-out timing, the very limited basket of options currently approved for our end use, and the lack of cost-effective alternatives fails to meet the flexibility needs of the market and jeopardizes these energy efficiency products that provide environmental and cost benefits to society and homeowners.**

Environmental impact of building foam insulation demonstrates that energy efficiency should not be left behind in climate discussions:

According to a McKinsey report on energy efficiency, insulation is a key lever for improving efficiency.[1] Heating accounts for 80% of buildings' sector energy consumption, demonstrating that energy efficiency could provide significant energy savings.[2] Furthermore, it is reported in the recent C-40 & McKinsey report titled *Focused Acceleration: A strategic approach to climate action in cities to 2030* that "optimizing energy efficiency in buildings could yield 3X the reduction potential from current trends in meeting their Paris Agreement targets."[3] Several other independent reports point to similar findings citing that the use of high performing building insulation and air sealing products can help to reliably meet energy demand and supports regional and international environmental goals.[4] [5] [6]

The use of Styrofoam™ building insulation has a large net positive contribution to GHG emissions reduction thanks to the energy savings the insulation provides throughout its lifetime even though there are limited emissions attributed to its manufacturing. **Based on published Life Cycle information, current Styrofoam™ Brand Insulation produced using HFCs will prevent at least 28 times more GHG emissions relative to its own carbon footprint over 50 years.[7]**

Therefore, the environmental impact of insulation must be considered from cradle-to-grave rather than focusing solely on emissions by the manufacturing process. Given the high thermal values of our building insulation products, the use of Styrofoam™ Brand Insulation and Froth-Pak™ Brand, even with current HFC technology, would lower United States' GHG emissions, helping states move towards their GHG reduction targets.

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[1] Energy Efficiency: A Compelling Global Resource. McKinsey Sustainability & Resource Productivity. McKinsey & Company, 2010. Page 21. Last viewed on April 7, 2020. Downloadable online at https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/Sustainability/PDFs/A_Compelling_Global_Resource.ashx

[2] Energy Efficiency: A Compelling Global Resource. McKinsey Sustainability & Resource Productivity. Page 23.

[3] Focused Acceleration: A strategic Approach to Climate Action in Cities to 2030. Joint Report by McKinsey Center for Business & Environment & C40. November 2017. Last viewed on April 7, 2020. Downloadable online at https://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/a-strategic-approach-to-climate-action-in-cities-focused-acceleration

[4] "Insulation" Webpage, Energy Saver, Office of Energy Efficiency & Renewable Energy, Department of Energy. Last viewed on June 6, 2018. https://www.energy.gov/energysaver/weatherize/insulation

[5] Life Cycle Greenhouse Gas Emissions Reduction From Rigid Thermal Insulation Use in Buildings M.H. Mazor, J.D. Mutton, D.A.M. Russell, G.A. Keoleian, J. Ind. Ecology, 15, 2, pp 284–299, April 2011.

[6] Building green with energy-efficient materials: Insulation. United States Green Building Council. Sep. 7, 2016. Last viewed on June 6, 2018. https://www.usgbc.org/articles/building-green-energyefficient-materials-insulation

[7] Life Cycle Greenhouse Gas Emissions Reduction From Rigid Thermal Insulation Use in Buildings M.H. Mazor, J.D. Mutton, D.A.M. Russell, G.A. Keoleian, J. Ind. Ecology, 15, 2, pp 284–299, April 2011.

Current state activity is creating barriers to innovation of new blowing agent alternatives:

DuPont is committed and actively working to find blowing agents with reduced Global Warming Potential (GWP) that support the high performance and safety characteristics of our building insulation products, meet multiple building code requirements, and align with our company's Responsible Care and Sustainability commitments.[8] Unfortunately, these two brand lines have significant technical issues in moving away entirely from HFCs. We have found through extensive research and development that we cannot immediately discontinue the use of all HFCs. Instead, we will need a different solution, including additional options, than what is currently being proposed in the states to allow for the continued sale of our product. This would be achievable under S. 2754 as it allows for the phase-down of HFCs over time rather, than an immediate ban (phase-out) of some HFCs.

We understand the intended outcome of this federal bill to be a fair phase-down for all segments at risk. Unfortunately, current or proposed legislation and regulation in multiple states forces our products to phase-out completely one critical HFC in an extremely short timeline. Indeed, some states are even contemplating programs that instigate HFC bans on January 1, 2021, providing less than a year to find alternatives and retool manufacturing processes. As S. 2754 is currently drafted, it is very possible that we find the XPS and 2K-LP markets in a situation in which both a federal phase-down and state phase-outs are happening simultaneously, creating a ban of DuPont's highly energy efficient products in those states.

The issue of programs being enforced as of January 1, 2021 is unique to the building insulation industry, since the largest HFC users, such as HVAC and others, had originally been granted more alternatives including blends and longer timelines. As explained in the next section, this issue originates from several years ago, when our niche end uses were left out of blowing agent blend applications to the EPA by the blowing agent suppliers. **This end use difference has allowed state governments to pick industry winners and losers – those end uses that are granted a phase-down over time and those that are banned from using specific HFCs at all next year.**

Overview of EPA SNAP approved blend listings for our end uses and current state activity:

In the SNAP Rules 20 and 21 of previous EPA regulation under section 7671(k) of the federal Clean Air Act (42 U.S.C. Sec. 7401 et seq.)), DuPont's end uses were not given adequate alternative blowing agent options and conversion timing, unlike the refrigerant and heating industries which are the largest volume users of HFCs. We have been working with EPA over the past several years to approve new options for our end uses, to make conversion timing more realistic, which will also reduce GWP significantly. Some of these new options for our end uses have already been approved for other end uses, such as HVAC. As the SNAP rules were remanded by multiple cases, the EPA is currently revamping the program and intends to have the newer listing rule out for public comment soon.

[8] DuPont has aligned its 2030 Sustainability Goals into the nine priorities of the United Nations Sustainable Development Goals. For more information, please visit https://www.dupont.com/about/sustainability.html.

In the meantime, many states are proceeding with SNAP-like regulations at a point in time prior to the remand, and do not all include the additional acceptable materials that are under current review at the EPA. This would phase-out a critical HFC used in DuPont's highly energy-efficient insulation products. States which have either adopted or are in the process of adopting the old SNAP language include California, Washington State, Vermont, New York, Maryland, New Jersey, Delaware, Colorado, Massachusetts, Connecticut, Hawaii, Maine and Oregon. These states are largely working with the older material approval list that no longer allows the use of a critical HFC in our end uses, creating a functional ban, and mostly at a January 1, 2021 conversion date.

There are currently 25 states that are members of the US Climate Alliance pushing for any action to phase-out HFCs without alignment to each other, with differences including deadlines, relationships to federal SNAP program, etc. Separate and inconsistent programs in a large number of states will have significant negative consequences to our supply chain, disrupting national commerce and our ability to meet customer demand for high-performing building insulation products. It must be noted that wholesalers and retailers of XPS with multi-state operations would have a challenging if not impossible time dealing with the supply chain issues of multiple products using different technologies. This supply chain complexity will ultimately increase the consumer cost of the product across the patchwork of states which could lead to use of less robust and energy efficient building insulations.

DuPont is asking for a mechanism to solve inconsistency of state programs for our end uses:

While we have worked directly with several states in collaboration with NGOs and blowing agent suppliers to agree upon a minor modification based on the 2015 and 2016 US EPA SNAP rules that have been adopted in several first mover states, there are many additional states with pending programs and no clear path forward for consistency, as mentioned above. **A mechanism for including EPA updates to state blowing agent approval lists is absent from many proposed state programs.** We are concerned that states are choosing to implement these programs, despite a lack of allocated resources and technical or other institutional knowledge required to approve blowing agent applications.

Additionally, the short timelines of states only now considering regulations to take effect in less than nine months does not facilitate adoption of new technology. Unlike in the majority of other HFC uses, foams technology adoption must be carried out facility by facility and requires 12-18 months of implementation time. Without this consideration, the number of building and construction foam insulation products available in states will be severely restricted, with some not available at all, which will result in higher prices for consumers and businesses alike.

DuPont fully supports a phase-down program that provides for a consistent regulatory framework that does not unnecessarily impede interstate commerce or innovation of blowing agent blend alternatives.

Conclusion and paths forward:

DuPont is seeking federal legislation that phases down HFCs, promotes interstate commerce, and maintains EPA as the authoritative body for approving blowing agents.

A potential path forward to achieving this goal would be a limited carve out for these highly energy efficient building insulation products that we could accomplish by deferring to EPA's determinations on whether to approve HFC blends in our industry and by prohibiting state laws that are inconsistent with those EPA determinations, while preserving existing state authorities to regulate HFC blends in this sector that have a higher global warming potential.

DuPont supports the Committee's objective of greenhouse gas emissions reduction and a national phase-down of HFCs. It is with this common goal that we respectfully share our industry's needs for alignment through continued technical approvals, so that we can continue to supply the states, and so that they can meet their climate and building energy efficiency goals.

DuPont appreciates the opportunity to comment on this important and timely legislation, and we look forward to working with the Committee.

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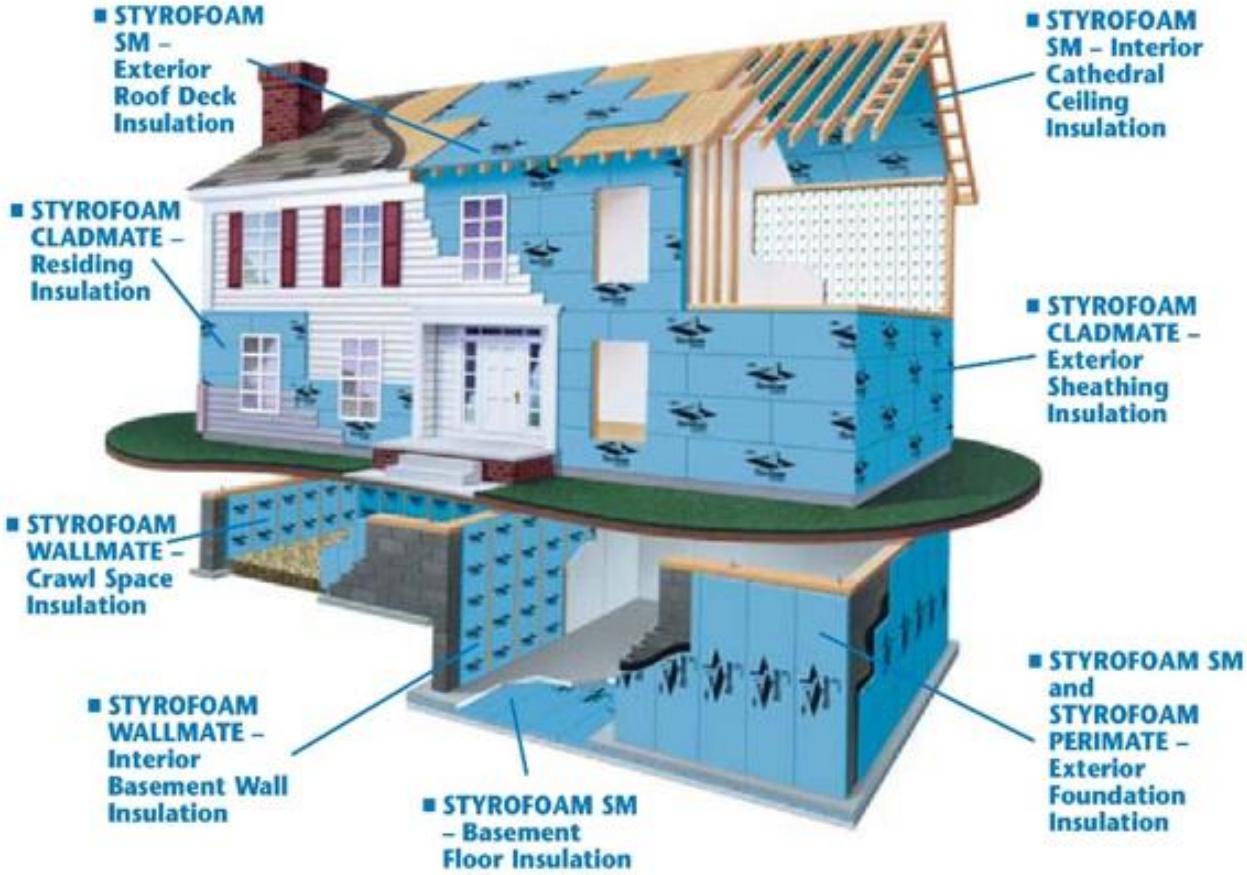
Visuals of Impacted DuPont Performance Building Solutions Products

- STYROFOAM™ Brand XPS Insulation products reduce heating and cooling contributing to the reduction of greenhouse gases and improve thermal comfort for building inhabitants.

End uses: Residential applications

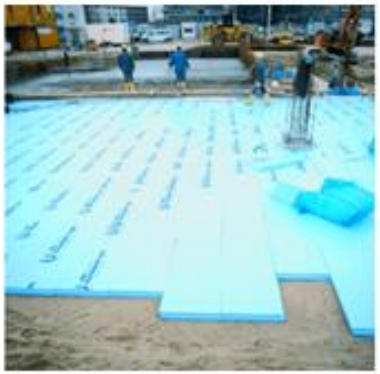
Building the foundation for comfortable, durable, energy-efficient homes



End uses: Commercial buildings

Raising the standards for designing and constructing comfortable, long-lasting buildings including increased moisture resistance, long term thermal performance, reduction of thermal bridging, and increased roof longevity.

- Walls
- Roofing
- Foundations



End uses: Infrastructure

- **Helping protect against cold and frost damage in Canadian infrastructure including:**
  - Airport runways, taxiways & embankments
  - Highways, tunnels and highway embankments
  - Railroads: under track, grade crossing, switching rail yards and other facilities
  - Transmission line towers
  - Utility Lines
  - Culverts
  - Retaining Walls
  - Foundations

https://www.dupont.com/building/infrastructure.html

End uses: Transportation

- Refrigerated trucks, containers, motorhomes & caravans: When it comes to improving a vehicle's efficiency, there's more to consider than just fuel consumption. STYROFOAM™ Brand XPS serves the transportation industry with high-performance insulations that enhance energy efficiency, durability and comfort for a range of vehicle types.

End uses: Cold Storage

In a low-temperature building, designing for thermal and moisture control is crucial to long-term performance and energy savings.

Dow rigid-foam insulations are designed for low-temperature applications and increases the energy efficiency of cold storage buildings.

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Coalition Letter to Vermont Authorities from NRDC, Chemours, Honeywell & AHRI

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 Tla.	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 Tlc.	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 application	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-143a, 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	Stand-Alone Units (Retrofit)	R-404A, R-507A	1-Jan-20
	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.

Coalition Letter to Delaware Authorities from NRDC, Chemours, Honeywell & AHRI

August 8, 2019

Secretary Shawn M. Garvin
Delaware Department of Natural Resources and Environmental Control
89 Kings Highway
Dover, Delaware 19901

Dear Secretary Garvin,

As the state considers specific measures to reduce the use of hydrofluorocarbons (HFCs), the undersigned organizations and companies write to encourage Delaware, whether by regulation or legislation, to prohibit uses of HFCs consistently with similar regulations in California, Washington and Vermont and in progress in New York, Maryland and Connecticut. 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 Delaware.

With minor modifications as shown in the attached appendix, the transitions adopted in California, Washington and Vermont 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 Delaware 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. Similarly, in May 2019, the Vermont state legislature passed a bill resembling that of Washington state.

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

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[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.

We support efforts in Delaware 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. Delaware 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.

We look forward to working with you as you develop draft regulations.

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 T1, and Formacel Z-6.	1-Jan-20
	Rigid Polyurethane Appliance Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel T1, and Formacel Z-6.	1-Jan-20
	Rigid Polyurethane Commercial Refrigeration and Sandwich Panels	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel T1, and Formacel Z-6.	1-Jan-20
	Rigid Polyurethane Marine Flotation Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel T1, 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 T1a.	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 T1c.	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 T1, 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 T1, and Formacel Z-6.	1-Jan-20
	Polystyrene Extruded Boardstock and Billet (XPS)	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel T1, Formacel B, and Formacel Z-6.*	1-Jan-21
	Polyolefin	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel T1, Formacel Z-6.	1-Jan-20
	Phenolic Insulation Board and Bunstock	HFC-143a, 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 T1.*	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	Stand-Alone Units (Retrofit)	R-404A, R-507A	1-Jan-20
	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.

Coalition Letter to Maryland Authorities from NRDC, Chemours, Honeywell & AHRI

June 6, 2019

The Honorable Benjamin H. Grumbles
Secretary of the Environment
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, Maryland 21230

Dear Secretary Grumbles,

As the state considers specific measures to reduce the use of hydrofluorocarbons (HFCs), the undersigned organizations and companies write to encourage Maryland, whether by regulation or legislation, to prohibit uses of HFCs consistently with similar regulations in California, Washington and Vermont and in progress in New York and Connecticut. 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 Maryland.

With minor modifications as shown in the attached appendix, the transitions adopted in California, Washington and Vermont 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 Maryland 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. Similarly, in May 2019, the Vermont state legislature passed a bill resembling that of Washington state.

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

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[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.

We support efforts in Maryland 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. Maryland 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.

We look forward to working with you as you develop draft regulations.

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	Prohibited substances	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-143a, 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	Stand-Alone Units (Retrofit)	R-404A, R-507A	1-Jan-20
	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 X), 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 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 SB 1013, WA HB 1112 and VT S30.

Governor Approved Washington State Legislation: HB-1112

CERTIFICATION OF ENROLLMENT

ENGROSSED SECOND SUBSTITUTE HOUSE BILL 1112

Chapter 284, Laws of 2019

66th Legislature
2019 Regular Session

HYDROFLUOROCARBON GREENHOUSE GAS EMISSIONS

EFFECTIVE DATE: July 28, 2019

Passed by the House March 1, 2019
Yeas 55 Nays 39

FRANK CHOPP

Speaker of the House of Representatives

Passed by the Senate April 22, 2019
Yeas 30 Nays 19

CYRUS HABIB

President of the Senate

Approved May 7, 2019 3:23 PM

JAY INSLEE

Governor of the State of Washington

CERTIFICATE

I, Bernard Dean, Chief Clerk of the House of Representatives of the State of Washington, do hereby certify that the attached is **ENGROSSED SECOND SUBSTITUTE HOUSE BILL 1112** as passed by the House of Representatives and the Senate on the dates hereon set forth.

BERNARD DEAN

Chief Clerk

FILED

May 13, 2019

Secretary of State
State of Washington

ENGROSSED SECOND SUBSTITUTE HOUSE BILL 1112

Passed Legislature - 2019 Regular Session

State of Washington **66th Legislature** **2019 Regular Session**

By House Appropriations (originally sponsored by Representatives Fitzgibbon, Kloba, Peterson, Tharinger, Jinkins, Macri, Goodman, Bergquist, Doglio, Robinson, Pollet, Stanford, and Frame)

READ FIRST TIME 02/22/19.

AN ACT Relating to reducing greenhouse gas emissions from hydrofluorocarbons; amending RCW 70.235.010, 70.94.430, 70.94.431, and 70.94.015; adding a new section to chapter 70.235 RCW; adding a new section to chapter 19.27 RCW; adding a new section to chapter 39.26 RCW; creating new sections; and prescribing penalties.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

NEW SECTION. **Sec. 1.** (1) The legislature finds that hydrofluorocarbons are air pollutants that pose significant threats to our environment and that safer alternatives for the most damaging hydrofluorocarbons are readily available and cost-effective.

(2) Hydrofluorocarbons came into widespread commercial use as United States environmental protection agency-approved replacements for ozone-depleting substances that were being phased out under an international agreement. However, under a 2017 federal appeals court ruling, while the environmental protection agency had been given the power to originally designate hydrofluorocarbons as suitable replacements for the ozone-depleting substances, the environmental protection agency did not have clear authority to require the replacement of hydrofluorocarbons once the replacement of the original ozone-depleting substances had already occurred.

(3) Because the impacts of climate change will not wait until congress acts to clarify the scope of the environmental protection agency's authority, it falls to the states to provide leadership on addressing hydrofluorocarbons. Doing so will not only help the climate, but will help American businesses retain their positions as global leaders in air conditioning and refrigerant technologies. Although hydrofluorocarbons currently represent a small proportion of the state's greenhouse gas emissions, emissions of hydrofluorocarbons have been rapidly increasing in the United States and worldwide, and they are thousands of times more potent than carbon dioxide. However, hydrofluorocarbons are also a segment of the state's emissions that will be comparatively easy to reduce and eliminate without widespread implications for the way that power is produced, heavy industries operate, or people transport themselves. Substituting or reducing the use of hydrofluorocarbons with the highest global warming potential will provide a significant boost to the state's efforts to reduce its greenhouse gas emissions to the limits established in RCW 70.235.020.

(4) Therefore, it is the intent of the legislature to transition to the use of less damaging hydrofluorocarbons or suitable substitutes in various applications in Washington, in a manner similar to the regulations that were adopted by the environmental protection agency, and that have been subsequently adopted or will be adopted in several other states around the country.

Sec. 2. RCW 70.235.010 and 2010 c 146 s 1 are each amended to read as follows:

The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

(1) "Carbon dioxide equivalents" means a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

(2) "Climate advisory team" means the stakeholder group formed in response to executive order 07-02.

(3) "Climate impacts group" means the University of Washington's climate impacts group.

(4) "Department" means the department of ecology.

(5) "Director" means the director of the department.

(6) "Greenhouse gas" and "greenhouse gases" includes carbon dioxide, methane, nitrous oxide, hydrofluorocarbons,

perfluorocarbons, sulfur hexafluoride, and any other gas or gases designated by the department by rule.

(7) "Person" means an individual, partnership, franchise holder, association, corporation, a state, a city, a county, or any subdivision or instrumentality of the state.

(8) "Program" means the department's climate change program.

(9) "Western climate initiative" means the collaboration of states, Canadian provinces, Mexican states, and tribes to design a multisector market-based mechanism as directed under the western regional climate action initiative signed by the governor on February 22, 2007.

(10) "Class I substance" and "class II substance" means those substances listed in 42 U.S.C. Sec. 7671a, as it read on November 15, 1990, or those substances listed in Appendix A or B of Subpart A of 40 C.F.R. Part 82, as those read on January 3, 2017.

(11) "Hydrofluorocarbons" means a class of greenhouse gases that are saturated organic compounds containing hydrogen, fluorine, and carbon.

(12) "Manufacturer" includes any person, firm, association, partnership, corporation, governmental entity, organization, or joint venture that produces any product that contains or uses hydrofluorocarbons or is an importer or domestic distributor of such a product.

(13) "Residential consumer refrigeration products" has the same meaning as defined in section 430.2 of Subpart A of 10 C.F.R. Part 430 (2017).

(14) "Retrofit" has the same meaning as defined in section 152 of Subpart F of 40 C.F.R. Part 82, as that section existed as of January 3, 2017.

(15) "Substitute" means a chemical, product substitute, or alternative manufacturing process, whether existing or new, that is used to perform a function previously performed by a class I substance or class II substance and any substitute subsequently adopted to perform that function, including, but not limited to, hydrofluorocarbons. "Substitute" does not include 2-BTP or any compound as applied to its use in aerospace fire extinguishing systems.

NEW SECTION. **Sec. 3.** A new section is added to chapter 70.235 RCW to read as follows:

(1) A person may not offer any product or equipment for sale, lease, or rent, or install or otherwise cause any equipment or product to enter into commerce in Washington if that equipment or product consists of, uses, or will use a substitute, as set forth in appendix U and V, Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, for the applications or end uses restricted by appendix U or V of the federal regulation, as those read on January 3, 2017, consistent with the deadlines established in subsection (2) of this section. Except where existing equipment is retrofit, nothing in this subsection requires a person that acquired a restricted product or equipment prior to the effective date of the restrictions in subsection (2) of this section to cease use of that product or equipment. Products or equipment manufactured prior to the applicable effective date of the restrictions specified in subsection (2) of this section may be sold, imported, exported, distributed, installed, and used after the specified effective date.

(2) The restrictions under subsection (1) of this section for the following products and equipment identified in appendix U and V, Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, take effect beginning:

(a) January 1, 2020, for:

(i) Propellants;

(ii) Rigid polyurethane applications and spray foam, flexible polyurethane, integral skin polyurethane, flexible polyurethane foam, polystyrene extruded sheet, polyolefin, phenolic insulation board, and bunstock;

(iii) Supermarket systems, remote condensing units, stand-alone units, and vending machines;

(b) January 1, 2021, for:

(i) Refrigerated food processing and dispensing equipment;

(ii) Compact residential consumer refrigeration products;

(iii) Polystyrene extruded boardstock and billet, and rigid polyurethane low-pressure two component spray foam;

(c) January 1, 2022, for residential consumer refrigeration products other than compact and built-in residential consumer refrigeration products;

(d) January 1, 2023, for cold storage warehouses;

(e) January 1, 2023, for built-in residential consumer refrigeration products;

(f) January 1, 2024, for centrifugal chillers and positive displacement chillers; and

(g) On either January 1, 2020, or the effective date of the restrictions identified in appendix U and V, Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, whichever comes later, for all other applications and end uses for substitutes not covered by the categories listed in (a) through (f) of this subsection.

(3) The department may by rule:

(a) Modify the effective date of a prohibition established in subsection (2) of this section if the department determines that the rule reduces the overall risk to human health or the environment and reflects the earliest date that a substitute is currently or potentially available;

(b) Prohibit the use of a substitute if the department determines that the prohibition reduces the overall risk to human health or the environment and that a lower risk substitute is currently or potentially available;

(c)(i) Adopt a list of approved substitutes, use conditions, or use limits, if any; and

(ii) Add or remove substitutes, use conditions, or use limits to or from the list of approved substitutes if the department determines those substitutes reduce the overall risk to human health and the environment; and

(d) Designate acceptable uses of hydrofluorocarbons for medical uses that are exempt from the requirements of subsection (2) of this section.

(4)(a) Within twelve months of another state's enactment or adoption of restrictions on substitutes applicable to new light duty vehicles, the department may adopt restrictions applicable to the sale, lease, rental, or other introduction into commerce by a manufacturer of new light duty vehicles consistent with the restrictions identified in appendix B, Subpart G of 40 C.F.R. Part 82, as it read on January 3, 2017. The department may not adopt restrictions that take effect prior to the effective date of restrictions adopted or enacted in at least one other state.

(b) If the United States environmental protection agency approves a previously prohibited hydrofluorocarbon blend with a global warming potential of seven hundred fifty 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 must expeditiously propose a rule consistent with RCW 34.05.320 to conform the requirements established under this section with that federal action.

(5) A manufacturer must disclose the substitutes used in its products or equipment. That disclosure must take the form of:

(a) A label on the equipment or product. The label must meet requirements designated by the department by rule. To the extent feasible, the department must recognize existing labeling that provides sufficient disclosure of the use of substitutes in the product or equipment.

(i) The department must consider labels required by state building codes and other safety standards in its rule making; and

(ii) The department may not require labeling of aircraft and aircraft components subject to certification requirements of the federal aviation administration.

(b) Submitting information about the use of substitutes to the department, upon request.

(i) By December 31, 2019, all manufacturers must notify the department of the status of each product class utilizing hydrofluorocarbons or other substitutes restricted under subsection (1) of this section that the manufacturer sells, offers for sale, leases, installs, or rents in Washington state. This status notification must identify the substitutes used by products or equipment in each product or equipment class in a manner determined by rule by the department.

(ii) Within one hundred twenty days after the date of a restriction put in place under this section, any manufacturer affected by the restriction must provide an updated status notification. This notification must indicate whether the manufacturer has ceased the use of hydrofluorocarbons or substitutes restricted under this section within each product class and, if not, what hydrofluorocarbons or other restricted substitutes remain in use.

(iii) After the effective date of a restriction put in place under this section, any manufacturer must provide an updated status notification when the manufacturer introduces a new or modified product or piece of equipment that uses hydrofluorocarbons or changes the type of hydrofluorocarbons utilized within a product class

affected by a restriction. Such a notification must occur within one hundred twenty days of the introduction into commerce in Washington of the product or equipment triggering this notification requirement.

(6) The department may adopt rules to administer, implement, and enforce this section. If the department elects to adopt rules, the department must seek, where feasible and appropriate, to adopt rules, including rules under subsection (4) of this section, that are the same or consistent with the regulatory standards, exemptions, reporting obligations, disclosure requirements, and other compliance requirements of other states or the federal government that have adopted restrictions on the use of hydrofluorocarbons and other substitutes. Prior to the adoption or update of a rule under this section, the department must identify the sources of information it relied upon, including peer-reviewed science.

(7) For the purposes of implementing the restrictions specified in appendix U of Subpart G of 40 C.F.R. Part 82, as it read on January 3, 2017, consistent with this section, the department must interpret the term "aircraft maintenance" to mean activities to support the production, fabrication, manufacture, rework, inspection, maintenance, overhaul, or repair of commercial, civil, or military aircraft, aircraft parts, aerospace vehicles, or aerospace components.

(8) The authority granted by this section to the department for restricting the use of substitutes is supplementary to the department's authority to control air pollution pursuant to chapter 70.94 RCW. Nothing in this section limits the authority of the department under chapter 70.94 RCW.

(9) Except where existing equipment is retrofit, the restrictions of this section do not apply to or limit any use of commercial refrigeration equipment that was installed or in use prior to the effective date of the restrictions established in this section.

Sec. 4. RCW 70.94.430 and 2011 c 96 s 49 are each amended to read as follows:

(1) Any person who knowingly violates any of the provisions of chapter 70.94 or 70.120 RCW, <u>section 3 of this act,</u> or any ordinance, resolution, or regulation in force pursuant thereto is guilty of a gross misdemeanor and upon conviction thereof shall be punished by a fine of not more than ten thousand dollars, or by imprisonment in the

county jail for up to three hundred sixty-four days, or by both for each separate violation.

(2) Any person who negligently releases into the ambient air any substance listed by the department of ecology as a hazardous air pollutant, other than in compliance with the terms of an applicable permit or emission limit, and who at the time negligently places another person in imminent danger of death or substantial bodily harm is guilty of a gross misdemeanor and shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for up to three hundred sixty-four days, or both.

(3) Any person who knowingly releases into the ambient air any substance listed by the department of ecology as a hazardous air pollutant, other than in compliance with the terms of an applicable permit or emission limit, and who knows at the time that he or she thereby places another person in imminent danger of death or substantial bodily harm, is guilty of a class C felony and shall, upon conviction, be punished by a fine of not less than fifty thousand dollars, or by imprisonment for not more than five years, or both.

(4) Any person who knowingly fails to disclose a potential conflict of interest under RCW 70.94.100 is guilty of a gross misdemeanor, and upon conviction thereof shall be punished by a fine of not more than five thousand dollars.

Sec. 5. RCW 70.94.431 and 2013 c 51 s 6 are each amended to read as follows:

(1)(a) Except as provided in RCW 43.05.060 through 43.05.080 and 43.05.150, and in addition to or as an alternate to any other penalty provided by law, any person who violates any of the provisions of this chapter, chapter 70.120 ((~~RCW, chapter~~)) or 70.310 RCW, section 3 of this act, or any of the rules in force under such chapters or section may incur a civil penalty in an amount not to exceed ten thousand dollars per day for each violation. Each such violation shall be a separate and distinct offense, and in case of a continuing violation, each day's continuance shall be a separate and distinct violation.

(b) Any person who fails to take action as specified by an order issued pursuant to this chapter shall be liable for a civil penalty of not more than ten thousand dollars for each day of continued noncompliance.

(2)(a) Penalties incurred but not paid shall accrue interest, beginning on the ninety-first day following the date that the penalty becomes due and payable, at the highest rate allowed by RCW 19.52.020 on the date that the penalty becomes due and payable. If violations or penalties are appealed, interest shall not begin to accrue until the thirty-first day following final resolution of the appeal.

(b) The maximum penalty amounts established in this section may be increased annually to account for inflation as determined by the state office of the economic and revenue forecast council.

(3) Each act of commission or omission which procures, aids or abets in the violation shall be considered a violation under the provisions of this section and subject to the same penalty. The penalties provided in this section shall be imposed pursuant to RCW 43.21B.300.

(4) All penalties recovered under this section by the department shall be paid into the state treasury and credited to the air pollution control account established in RCW 70.94.015 or, if recovered by the authority, shall be paid into the treasury of the authority and credited to its funds. If a prior penalty for the same violation has been paid to a local authority, the penalty imposed by the department under subsection (1) of this section shall be reduced by the amount of the payment.

(5) To secure the penalty incurred under this section, the state or the authority shall have a lien on any vessel used or operated in violation of this chapter which shall be enforced as provided in RCW 60.36.050.

(6) Public or private entities that are recipients or potential recipients of department grants, whether for air quality related activities or not, may have such grants rescinded or withheld by the department for failure to comply with provisions of this chapter.

(7) In addition to other penalties provided by this chapter, persons knowingly under-reporting emissions or other information used to set fees, or persons required to pay emission or permit fees who are more than ninety days late with such payments may be subject to a penalty equal to three times the amount of the original fee owed.

(8) ((~~By January 1, 1992,~~)) The department shall develop rules for excusing excess emissions from enforcement action if such excess emissions are unavoidable. The rules shall specify the criteria and procedures for the department and local air authorities to determine

whether a period of excess emissions is excusable in accordance with the state implementation plan.

Sec. 6. RCW 70.94.015 and 1998 c 321 s 33 are each amended to read as follows:

(1) The air pollution control account is established in the state treasury. All receipts collected by or on behalf of the department from RCW 70.94.151(2), and receipts from nonpermit program sources under RCW 70.94.152(1) and 70.94.154(7), and all receipts from RCW ((~~70.94.650, 70.94.660, 82.44.020(2), and 82.50.405~~)) 70.94.6528 and 70.94.6534 shall be deposited into the account. Moneys in the account may be spent only after appropriation. Expenditures from the account may be used only to develop and implement the provisions of chapters 70.94 and 70.120 RCW and section 3 of this act.

(2) The amounts collected and allocated in accordance with this section shall be expended upon appropriation except as otherwise provided in this section and in accordance with the following limitations:

Portions of moneys received by the department of ecology from the air pollution control account shall be distributed by the department to local authorities based on:

(a) The level and extent of air quality problems within such authority's jurisdiction;

(b) The costs associated with implementing air pollution regulatory programs by such authority; and

(c) The amount of funding available to such authority from other sources, whether state, federal, or local, that could be used to implement such programs.

(3) The air operating permit account is created in the custody of the state treasurer. All receipts collected by or on behalf of the department from permit program sources under RCW 70.94.152(1), 70.94.161, 70.94.162, and 70.94.154(7) shall be deposited into the account. Expenditures from the account may be used only for the activities described in RCW 70.94.152(1), 70.94.161, 70.94.162, and 70.94.154(7). Moneys in the account may be spent only after appropriation.

NEW SECTION. **Sec. 7.** A new section is added to chapter 19.27 RCW to read as follows:

The building code council shall adopt rules that permit the use of substitutes approved under section 3 of this act and that do not require the use of substitutes that are restricted under section 3 of this act.

NEW SECTION. **Sec. 8.** The department of ecology, in consultation with the department of commerce and the utilities and transportation commission, must complete a report addressing how to increase the use of refrigerants with a low global warming potential in mobile sources, utility equipment, and consumer appliances, and how to reduce other uses of hydrofluorocarbons in Washington. The report must be submitted to the legislature consistent with RCW 43.01.036 by December 1, 2020, and must include recommendations for how to fund, structure, and prioritize a state program that incentivizes or provides grants to support the elimination of legacy uses of hydrofluorocarbons regulated under section 3 of this act or uses of hydrofluorocarbons not covered by section 3 of this act.

NEW SECTION. **Sec. 9.** A new section is added to chapter 39.26 RCW to read as follows:

(1) The department shall establish purchasing and procurement policies that provide a preference for products that:

(a) Are not restricted under section 3 of this act;

(b) Do not contain hydrofluorocarbons or contain hydrofluorocarbons with a comparatively low global warming potential;

(c) Are not designed to function only in conjunction with hydrofluorocarbons characterized by a comparatively high global warming potential; and

(d) Were not manufactured using hydrofluorocarbons or were manufactured using hydrofluorocarbons with a low global warming potential.

(2) No agency may knowingly purchase products that are not accorded a preference in the purchasing and procurement policies established by the department pursuant to subsection (1) of this section, unless there is no cost-effective and technologically feasible option that is accorded a preference.

(3) Nothing in this section requires the department or any other state agency to breach an existing contract or dispose of stock that has been ordered or is in the possession of the department or other state agency as of the effective date of this section.

(4) By December 1, 2020, and each December 1st of even numbered years thereafter, the department must submit a status report to the appropriate committees of the house of representatives and senate regarding the implementation and compliance of the department and state agencies with this section.

NEW SECTION. **Sec. 10.** If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected.

--- **END** ---

Governor Approved California State Legislation: SB-1013

STATE OF CALIFORNIA
AUTHENTICATED
ELECTRONIC LEGAL MATERIAL

Senate Bill No. 1013

CHAPTER 375

An act to add Section 39734 to the Health and Safety Code, and to add Division 45 (commencing with Section 76000) to the Public Resources Code, relating to greenhouse gases.

[Approved by Governor September 13, 2018. Filed with Secretary of State September 13, 2018.]

LEGISLATIVE COUNSEL'S DIGEST

SB 1013, Lara. Fluorinated refrigerants.

(1) Existing law prohibits the manufacture and sale of specified chlorofluorocarbons (CFCs) as aerosol propellants, limits the percentage of new motor vehicles equipped with air-conditioners that utilize CFC-based products, requires the State Air Resources Board to adopt regulations to provide for the enforcement of those provisions, and imposes a civil penalty on persons violating those provisions.

This bill would apply all prohibitions on the use of class I substances, as defined, class II substances, as defined, and substitutes, as defined, under the federal Clean Air Act, as it read on specified dates, except as specified. The bill would authorize the state board to include in a specified regulation the modification of the deadlines of those prohibitions, a prohibition on the use of any substitute, and the creation and update of a list of approved substitutes, use conditions, or use limits if the state board makes certain findings for each. The bill would allow a violation of these provisions to be enjoined and would subject persons who violate these provisions to specified penalties. The bill would require all civil penalty money collected by the state board to be deposited in the Air Pollution Control Fund rather than the General Fund. Because a violation of these requirements would also be a crime, this bill would impose a state-mandated local program.

This bill would establish the Fluorinated Gases Emission Reduction Incentive Program, to be administered by the state board, to promote the adoption of new refrigerant technologies to achieve short- and long-term climate benefits, energy efficiency, and other cobenefits, as specified. The bill would authorize moneys from the Greenhouse Gas Reduction Fund to be allocated for incentives offered as part of the program.

This bill would require the Public Utilities Commission to consider developing a strategy for including low-global-warming-potential refrigerants in equipment funded by the energy efficiency programs overseen by the Public Utilities Commission.

This bill would require the State Energy Resources Conservation and Development Commission to identify opportunities to assess the energy

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efficiency performance for low-global-warming-potential alternatives to current fluorinated-gas-based appliances and equipment.

This bill would require the Department of Community Services and Development to consider integrating low global warming potential as part of its ongoing administration of energy efficiency programs for household appliances.

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

The people of the State of California do enact as follows:

SECTION 1. Section 39734 is added to the Health and Safety Code, to read:

39734. (a) The Legislature finds and declares that certain fluorinated gases are potent causes of global warming, and it is in the public interest that restrictions or prohibitions on the use of these gases be maintained and enhanced as appropriate in the state.

(b) For purposes of this section, the following definitions apply:

(1) "Class I substances" and "class II substances" mean those substances listed in 42 U.S.C. Sec. 7671a, as it read on November 15, 1990, or those substances listed in Appendix A or B of Subpart A of 40 C.F.R. Part 82, as those read on January 3, 2017.

(2) "Hydrofluorocarbons" mean fluorinated gases used primarily as refrigerants in refrigeration, air-conditioning equipment, foam expansion agents, aerosol propellants, solvents, and fire suppressants.

(3) "Residential consumer refrigeration products" has the same meaning as defined in Section 430.2 of Subpart A of 10 C.F.R. Part 430.

(4) "Substitute" means a chemical, product substitute, or alternative manufacturing process, whether existing or new, that is used to perform a function previously performed by a class I substance or class II substance and any substitute subsequently adopted to perform that function, including, but not limited to, hydrofluorocarbons.

(c) (1) All prohibitions on the use of class I substances and class II substances as set forth in 42 U.S.C. Secs. 7671a and 7671k, as those read on November 15, 1990, or any substitute as set forth in Appendix U and Appendix V of Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, shall apply, except as otherwise provided by in paragraph (3), state statute, or state regulation.

(2) If the United States Environmental Protection Agency approves a previously prohibited hydrofluorocarbon blend for foam blowing pursuant to the Significant New Alternatives Policy Program, adopted pursuant to Section 7671k of the federal Clean Air Act (42 U.S.C. Sec. 7401 et seq.), the state board shall expeditiously initiate a rulemaking pursuant to this

section or other existing legal authority to conform its regulations with that federal action.

(3) (A) Prohibitions on residential consumer refrigeration products, except compact and built-in residential consumer refrigeration products, shall take effect January 1, 2022.

(B) Prohibitions on built-in residential consumer refrigeration products shall take effect on January 1, 2023.

(d) The state board may adopt a regulation that includes any of the following:

(1) The modification of the deadlines of a prohibition established pursuant to subdivision (c) if the state board determines that the modified deadline meets both of the following:

(A) Reduces the overall risk to human health or the environment.

(B) Reflects the earliest date that a substitute is currently or potentially available.

(2) The prohibition on the use of any substitute if the state board determines that the prohibition meets both of the following criteria:

(A) Reduces the overall risk to human health or the environment.

(B) A lower-risk substitute is currently or potentially available.

(3) The creation of a list of approved substitutes, use conditions, or use limits, if any, and the addition or removal of substitutes, use conditions, or use limits to or from the list of approved substitutes if the state board determines those substitutes reduce the overall risk to human health and the environment.

(e) A person shall not offer any equipment or product for sale, lease, rent, or otherwise cause any equipment or product to enter into commerce in California if that equipment or product uses or will use a substitute in a manner inconsistent with any of the following:

(1) Any prohibitions in subdivision (c).

(2) Any prohibitions, use conditions, or use limits in subdivision (d) or a state regulation.

(3) Any other applicable laws, including, but not limited to, the California Building Standards Code (Title 24 of the California Code of Regulations).

(f) (1) The state board may enforce this section. A violation of the requirements of this section may be enjoined pursuant to Section 41513 and is subject to the penalties set forth in Article 3 (commencing with Section 42400) of Chapter 4 of Part 4.

(2) Notwithstanding subdivisions (i) and (j) of Section 42410, the state board may impose an administrative penalty pursuant to Section 42410.

(3) Penalties collected pursuant to this section shall be deposited in the Air Pollution Control Fund.

(g) The provisions of this section are severable. If any provision of this section or its application is held invalid, that invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.

SEC. 2. Division 45 (commencing with Section 76000) is added to the Public Resources Code, to read:

DIVISION 45. FLUORINATED REFRIGERANTS

76000. For purposes of this division, "GWP" means global warming potential.

76002. The Public Utilities Commission shall consider developing a strategy for including low-GWP refrigerants in equipment funded by the energy efficiency programs overseen by the Public Utilities Commission.

76004. The State Energy Resources Conservation and Development Commission shall identify opportunities to assess the energy efficiency performance for low-GWP alternatives for current fluorinated-gas-based appliances and equipment.

76006. The Department of Community Services and Development shall consider integrating low GWP as part of its ongoing administration of energy efficiency programs for household appliances, including, but not limited to, the Energy Efficiency Low-Income Weatherization Program.

76008. (a) (1) The Fluorinated Gases Emission Reduction Incentive Program is hereby established to be administered by the State Air Resources Board to promote the adoption of refrigerant technologies to achieve short- and long-term climate benefits, energy efficiency, and other cobenefits.

(2) Moneys for the program shall be available to the State Air Resources Board, upon appropriation by the Legislature, including, but not limited to, moneys from the Greenhouse Gas Reduction Fund, created pursuant to Section 16428.8 of the Government Code.

(b) The state board may contract with a third party to administer this section.

(c) Eligible applicants shall be users of systems of refrigerant technologies.

(d) When awarding incentives, the State Air Resources Board shall prioritize both of the following:

(1) Low-GWP alternatives that maximize emissions reductions and focus on key cooling sectors where technology is commercially available.

(2) The use of low-GWP alternatives in new technologies for which higher upfront costs, compared with hydrofluorocarbon systems, have been identified by the State Air Resources Board as a market impediment.

(e) The program shall include all of the following:

(1) Allow a retailer to apply for funding for multiple stores or units.

(2) Identify opportunities for outreach efforts to demonstrate and provide information about low-GWP alternatives in refrigeration and air-conditioning.

(3) Require the professional installation and maintenance of alternative refrigeration and air-conditioning equipment in order to maximize energy efficiency and minimize emissions.

(4) Identify opportunities to increase the recovery, reclamation, or destruction of existing high-GWP refrigerants.

(5) Identify opportunities to offer matching funds to local publicly owned electric and gas utilities that offer their own low-GWP incentive programs.

(6) Comply with federal and state laws regarding the disposal and capture of fluorinated gases.

(7) Determine the most environmentally beneficial outcome for the replaced equipment.

SEC. 3. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

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Governor Approved Vermont State Legislation: S.30 (Act 65)

No. 65. An act relating to the regulation of hydrofluorocarbons.

(S.30)

It is hereby enacted by the General Assembly of the State of Vermont:

Sec. 1. 10 V.S.A. § 586 is added to read:

§ 586. REGULATION OF HYDROFLUOROCARBONS

(a) As used in this section:

(1) "Class I substance" and "class II substance" mean those substances listed in the 42 U.S.C. § 7671a, as it read on November 15, 1990 and Appendix A or B of Subpart A of 40 C.F.R. Part 82, as those read on January 3, 2017.

(2) "Hydrofluorocarbon" means a class of greenhouse gases that are saturated organic compounds containing hydrogen, fluorine, and carbon.

(3) "Residential consumer refrigeration product" has the same meaning as in Section 430.2 of Subpart A of 10 C.F.R. Part 430.

(4) "Retrofit" has the same meaning as in section 152 of Subpart F of 40 C.F.R. Part 82, as that section existed as of January 3, 2017.

(5) "Substitute" means a chemical, product, or alternative manufacturing process, whether new or retrofit, that is used to perform a function previously performed by a class I substance or class II substance and any substitute subsequently adopted to perform that function, including hydrofluorocarbons.

(b)(1) A person may not offer any product or equipment for sale, lease, or rent, or install or otherwise cause any equipment or product to enter into commerce in Vermont if that equipment or product consists of, uses, or will

use a substitute, as set forth in Appendix U or V, Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, for the applications or end uses restricted by Appendix U or V, as those read on January 3, 2017, and consistent with the dates established in subdivision (b)(4) of this section.

(2) Except where existing equipment is retrofit, nothing in this subsection requires a person that acquired a restricted product or equipment prior to an effective date of the restrictions in subdivision (b)(4) of this section to cease use of that product or equipment.

(3) Products or equipment manufactured prior to an applicable effective date of the restrictions in subdivision (b)(4) of this section may be sold, imported, exported, distributed, installed, and used after the specified effective date.

(4) The restrictions under subdivision (b)(1) of this section shall take effect beginning:

(A) January 1, 2021, for propellants, rigid polyurethane applications and spray foam, flexible polyurethane, integral skin polyurethane, flexible polyurethane foam, polystyrene extruded sheet, polyolefin, phenolic insulation board and bunstock, supermarket systems, remote condensing units, stand-alone units, and vending machines;

(B) January 1, 2021, for refrigerated food processing and dispensing equipment, compact residential consumer refrigeration products, and

polystyrene extruded boardstock and billet, and rigid polyurethane low-pressure two component-spray foam;

(C) January 1, 2022, for residential consumer refrigeration products other than compact and built-in residential consumer refrigeration products;

(D) January 1, 2023, for cold storage warehouses and built-in residential consumer refrigeration products;

(E) January 1, 2024, for centrifugal chillers and positive displacement chillers; and

(F) January 1, 2020, or the effective date of the restrictions identified in appendix U or V, Subpart G of 40 C.F.R. Part 82, as those read on January 3, 2017, whichever comes later, for all other applications and end uses for substitutes not covered by the categories listed in subdivisions (A) through (E) of this subsection (b).

(c) The Secretary may adopt rules that include any of the following:

(1) The modification of the date of a prohibition established pursuant to subsection (b) of this section if the Secretary determines that the modified deadline meets both of the following criteria:

(A) reduces the overall risk to human health or the environment; and

(B) reflects the earliest date that a substitute is currently or potentially available.

(2) The prohibition on the use of any substitute if the Secretary determines that the prohibition meets both of the following criteria:

(A) reduces the overall risk to human health or the environment; and

(B) a lower-risk substitute is currently or potentially available.

(3) The creation of a list of approved substitutes, use conditions, or use limits, if any, and the addition or removal of substitutes, use conditions, or use limits to or from the list of approved substitutes if the Secretary determines those substitutes reduce the overall risk to human health and the environment.

(4) The creation of a list of exemptions from this section for medical uses of hydrofluorocarbons.

(d) If the U.S. 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 Secretary shall expeditiously propose a rule to conform to the requirements established under this section with that federal action.

Sec. 2. ADOPTION OF RULES AND REPORTING

(a) On or before July 1, 2020, the Secretary of Natural Resources shall file with the Secretary of State proposed rules to establish a schedule to phase down the use of hydrofluorocarbons to meet the goal of a 40 percent reduction from the 2013 level of use by 2030.

(b) On or before January 15, 2020, the Secretary of Natural Resources shall submit a report to the Senate Committee on Natural Resources and Energy and the House Committee on Natural Resources, Fish, and Wildlife on progress in filing proposed rules pursuant to subsection (a) of this section and any delays in such rulemaking.

Sec. 3. EFFECTIVE DATE

This act shall take effect on July 1, 2019.

Date Governor signed bill: June 17, 2019