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FACT SHEET: Obama Administration Partners with Private Sector on New Commitments to Slash Emissions of Potent Greenhouse Gases and Catalyze Global HFC Phase Down

The Obama Administration is committed to taking responsible steps to slow the effects of climate change so we leave behind a cleaner, more stable environment for future generations. That's why, today, the Administration is announcing new private sector commitments and executive actions to reduce emissions of hydroflourocarbons (HFCs), powerful greenhouse gases that contribute to climate change**.** The commitments made today would reduce cumulative global consumption of these greenhouse gases by the equivalent of 700 million metric tons of carbon dioxide through 2025, equivalent to 1.5% of the world's 2010 greenhouse gas emissions and the same as taking nearly 15 million cars off the road for 10 years. In addition, the Administration is announcing a set of executive actions to continue progress in reducing HFC emissions.

HFCs, factory-made gases used in air conditioning and refrigeration, are one of the strongest greenhouse gases in the atmosphere and are up to 10,000 times more potent than carbon dioxide. Unless we act now, U.S. HFC emissions are expected to nearly double by 2020 and triple by 2030. When the President launched his Climate Action Plan last year, he pledged to leverage new opportunities to reduce HFCs. U.S. industry is leading the way in helping fulfill that pledge by investing millions of dollars to develop and deploy the next generation of safer HFC alternatives, and by incorporating climate-friendly technologies into the cars, air conditioners, refrigerators, foams and other products they manufacture and use.

Today's commitments and actions demonstrate significant U.S. leadership in advance of the United Nations Climate Summit next week and build on progress made earlier in the Administration. This summer, the Environmental Protection Agency proposed two new rules under the Significant New Alternatives Policy (SNAP) program that would smooth transition to

climate-friendly alternatives to HFCs, including by expanding the list of acceptable alternatives and limiting use of some of the most harmful HFCs where lower risk alternatives are available. And on the international stage, the U.S. and China agreed last year to work together to phase down the consumption and production of HFCs, and G-20 leaders followed by expressing their own support for an HFC phase down. Today's actions will build momentum for an amendment to the Montreal Protocol to phase down the global production and consumption of HFCs, which could result in avoided emissions of as much as 240 million metric tons carbon dioxide equivalent in 2025 in the United States alone, roughly 4% of current U.S. greenhouse emissions. The Montreal Protocol is a landmark global agreement that came into effect 27 years ago today that allows for such a phase down. The President will continue to leverage opportunities for U.S. leadership in cutting the drivers of climate change and helping leave behind a safer and healthier world.

Private Sector Commitments

The commitments announced today span the entire HFC supply chain – from where the chemicals are produced, to where they are used in manufacturing, to where consumers see them in stores – demonstrating that every component of American industry is responding to the President's call to action on HFC emissions reduction. These industry associations and companies are making significant commitments to phase out or phase down their use of HFCs and transition to climate-friendly alternatives that are good for the environment and good for business. The Administration will continue to engage with the private sector on their progress on this initiative.

The Alliance for Responsible Atmospheric Policy, an industry coalition representing more than 95 percent of U.S. HFC production and a significant majority of the user industries, is announcing actions today that support a Montreal Protocol amendment to phase down the production and consumption of HFCs. The Alliance also announced today that it commits to take actions and support policies with a goal to reduce global HFC greenhouse gas contribution by 80% by 2050 relative to current emissions. This will be accomplished by advancing technologies; improving servicing practices; increasing recovery, reclamation, and reuse; and conducting technology assessments and workshops.

Air Conditioning Heating & Refrigeration Institute, an industry association representing 90% of US air conditioning manufacturing and 70% of the global industry, announced today that its member companies will commit to spending $5 billion in new R&D and capital expenditures to develop and commercialize low global warming potential (GWP) technologies over the next ten years. During the past decade, the Institute has worked diligently to reduce the potential impact of refrigerants on the Earth's climate, including spending close to $2 billion since 2009 researching low-GWP refrigerants and technologies.

Arkema, a diversified worldwide manufacturer of specialty industrial chemicals and high performance materials for use in renewable energies and other sectors, announced today that it is committed to the development of climate-friendly products to provide a timely and adequate global

supply base. Arkema commits to reduce GHG emissions from its operations by an additional 30% by 2020, as well as its net energy purchases by 1.5% on average each year through the year 2020. Finally, Arkema agrees to control, and to the extent feasible, eliminate byproduct emissions of HFC-23, the most potent HFC, at all its fluorochemical production facilities worldwide.

Coca-Cola, the world's largest beverage company, has set a goal for 100 percent of its newly purchased cold drink equipment to be HFC-free. To date, Coca-Cola has more than 1 million units of HFC-free refrigerated equipment in use throughout its global system, achieving 30% use of HFC-free refrigeration equipment this year. In the U.S., Coca-Cola has already purchased 20,000 HFC-free units in 2014. The company is also increasing the energy efficiency of its refrigeration equipment, which has improved by more than 50 percent since 2000.

Carrier, a global manufacturer and distributor of high-technology heating, air conditioning and refrigeration solutions and part of United Technologies Corp., announced today its commitment to pursue the commercialization of HFC-free refrigerants in road transportation refrigeration by 2020, building on its expertise with HFC-free carbon dioxide refrigerant in marine container and food retail refrigeration. Carrier's Syracuse, New York facility developed the world's first carbon dioxide technology for marine container refrigeration and is pursuing similar technology for road transport refrigeration. Carrier's CO2OLtec commercial refrigeration systems using carbon dioxide refrigerant are installed in nearly 1,000 supermarkets across Europe.

Danfoss, an international manufacturer of high efficiency products used in air-conditioning and refrigeration systems, announced today that it is championing a stakeholder task force to accelerate adoption of standards and building codes for next generation, low-GWP refrigerants. Danfoss will partner with the Alliance for Responsible Atmospheric Policy to establish this task force.

DuPont, the science company that invented fluorinated refrigerants and has helped lead the global transition to continually more sustainable refrigerants, announced today that its new products are anticipated to reduce greenhouse gas content of refrigerants by some 90 million tons carbon dioxide equivalent in the U.S., and 245 million tons worldwide by 2025, reducing greenhouse gases by a similar amount. This includes five products already in the market or soon to be introduced that provide alternatives in applications as varied as insulating foam production, commercial and retail refrigeration, automobile and building air conditioning, refrigerated transport, and industrial energy efficiency.

Emerson Climate Technologies, a global manufacturing and technology company in the heating, air conditioning and refrigeration industry, today announces its 2015 environmental stewardship initiatives, reinforcing its commitment to the development of low-GWP refrigerants and higher efficiency technologies. Emerson will launch a full line of compressors, flow and electronic controls approved with three non-flammable low-GWP HFCs. These refrigerants are 50 percent lower in GWP compared to today's choices. Emerson will also expand its full line of Scroll compressors for commercial refrigeration use in supermarkets and convenience stores that will be 15 percent more efficient than today's products. In July 2015, Emerson will expand its solutions offering for use with carbon dioxide, a non-HFC and energy-efficient refrigerant, with its complete line of compressors, flow controls, discrete and system electronic controls. Emerson invests nearly

two-thirds of its global R&D resources on developing low-GWP and energy efficient products, solutions and services, and will continue increasing its investment in 2015 with the opening of its new global innovation center in Dayton, Ohio. The center will focus on ways to solve energy and environmental challenges affecting everything from homes to data centers.

Goodman Manufacturing Company, an air conditioning and heating equipment manufacturer, announced today its commitment to have a full product line of low-GWP air conditioners and/or heat pumps after completion of working with EPA and other stakeholders to permit low-GWP refrigerants in both building codes and EPA's SNAP program.

Hillphoenix, a Dover Company and manufacturer of commercial refrigerated display cases and specialty products, refrigeration systems, integrated power distribution systems and walk-in coolers and freezers, announced today that it is commercializing a 100% HFC-free, carbon dioxide booster system now commercially viable for all climate regions. Hillphoenix is also introducing an HFC-free hydrocarbon self-contained door case and a recently re-engineered service called "Close the Case" that utilizes the company's door technology to retrofit existing open display cases.

Honeywell, a global technology and manufacturing company, serving customers worldwide with aerospace products and services; control technologies for buildings, homes, and industry; turbochargers; and performance materials, plans to transition the majority of its high-GWP HFC production to new low-GWP production. These changes will reduce Honeywell's annual production of high-GWP HFCs by nearly 50 percent on a carbon dioxide equivalent basis prior to 2020, with a cumulative elimination of more than 350 million metric tons carbon dioxide equivalent by 2025. To achieve this goal, Honeywell anticipates spending a total of more than $880 million for research and development and new capacity, mainly in the United States. Honeywell has commercialized a wide range of Solstice®-brand HFC replacements for use as refrigerants, insulating agents, aerosols, and solvents, which are being rapidly adopted. Honeywell also announced today the start-up of two new Solstice production plants in Baton Rouge, Louisiana, to manufacture these materials. Honeywell also agrees to strictly control and, to the extent feasible, eliminate byproduct emissions of HFC-23, the most potent HFC, at Honeywell fluorochemical production facilities.

Johnson Controls, a global multi-industrial company, announced today that it commits to using the lowest GWP option for each application that best fits the needs of its customers from the standpoint of safety, efficiency, reliability, availability, and economy. Johnson Controls also commits to spend $50 million over the next three years to develop new products and improve and expand its existing low-GWP portfolio, of which a significant portion of that investment will address products that traditionally use HFC refrigerants. The company has spent more than $26 million over the past three years in the development of low-GWP technologies.

Kroger, one of the world's largest retailers, announced today that it will join U.S. EPA's GreenChill program. Kroger, in joining GreenChill, commits to establishing a refrigerant inventory and set emissions reduction targets; using advanced refrigeration technologies in new and remodeled stores where feasible; collaborating across the industry to identify and share service

and operational practices that reduce emissions. Kroger is committed to reducing climate-damaging refrigerant emissions and exploring new designs that reduce the potential for these emissions.

Lapolla, a manufacturer and global distributor of spray foam insulation and reflective roof coating technology, announced today that it commits to transitioning its entire product line of foam and coating systems to no longer use high-GWP HFCs by 2016. Lapolla will also provide more than 18 seminars on the importance of eliminating high-GWP HFCs from the environment.

Los Angeles Department of Water and Power (LADWP), the largest municipal utility in the U.S., plans to include a criterion for low-GWP HFCs in its energy efficiency incentives for residential refrigerators, which would begin the market transformation to phase down high-GWP HFC use by sending the right signal to both manufacturers and consumers. Combating climate change is a top priority for LADWP, which has recently adopted an aggressive new energy efficiency goal to supply 15% of expected power needs in 2020 through energy efficiency, and has also committed to eliminate coal fired generation from its electricity supply by 2025, two years ahead of California mandates.

Mission Pharmacal, a third-generation, family-owned and operated healthcare company whose focus is to bring safe, innovative and high-quality products to physicians, patients and consumers, announced today the introduction of a Dr. Smith's® zinc oxide diaper rash spray that uses a new low-GWP aerosol technology. Mission Pharmacal is also announcing the introduction of a rash and skin spray and an adult barrier spray that utilize the same technology. Mission Pharmacal commits to continued development of aerosol products that help curb emissions of HFCs.

PepsiCo, one of the world's largest food and beverage companies, announced today a goal that all of its future point of sale equipment (coolers, vending machines and fountain dispensers) purchased in the United States, will be HFC-free by 2020. To meet this goal, PepsiCo will begin purchasing new HFC-free equipment starting in 2015. Outside of the United States, PepsiCo has already begun this process by buying more than 290,000 HFC-free pieces of equipment since 2009. To minimize the impact of existing equipment, PepsiCo has innovated its coolers and vending machines to improve their energy efficiency by 60% compared with a 2004 baseline and since 2010 has been using a 100% HFC-free insulation/foam for all new equipment. PepsiCo reports that the new insulation/foam eliminates 75% of HFC based direct emissions and that these combined efforts have reduced total GHG emissions by 18% since 2007.

Red Bull, the creator of the energy drink category, announced today that it will order an estimated 32,000 climate-friendly hydrocarbon coolers for 2015. Red Bull will also implement ongoing training of cooler service technicians from six partner companies for the repair and proper disposal of these coolers. Red Bull has committed to 100% procurement of ECO-Coolers for the cooling of its beverages where technically and legally feasible. Red Bull's ECO Coolers use up to 45% less energy than previous generations of cooling equipment and have an average energy saving of 23% compared to other conventional refrigerators.

SEVO Systems, a global manufacturer of non-HFC fire system technology advancement, announced today that it commits to enabling a reduction of the equivalent of 12 million metric tons

of carbon dioxide by 2020 by transitioning to low-GWP HFCs. This technology will be released using innovative fire suppression systems utilizing the unique properties of 3M™ Novec™ 1230 Fire Protection Fluid.

Target, an upscale retailer with approximately 1795 stores in the US, recently opened two new cold storage facilities expanding its refrigerated warehouse space by nearly one million square feet. These new facilities, designed with ammonia, an HFC-free refrigerant, also eliminate the use of HFC refrigerants in their heating, ventilating, and air conditioning systems and reduce their carbon impact by 900 metric tons of CO2. The company also has five stores that use carbon dioxide refrigeration systems and commits to expanding this technology to two additional sites in 2015. Target is also partnering with chemical producers to test a new generation of refrigerants, hydrofluoroolefins (HFOs) that do not affect the ozone layer and have at least a 60% lower GWP than the products they are replacing. In addition, Target is working with the manufacturer of beverage coolers to test HFC-free solutions this fall.

Thermo King, a brand of Ingersoll Rand that manufactures transport temperature control systems, is announcing that it will offer its customers safe, reliable, and energy efficient product alternatives and retrofit services for marine, truck and trailer applications using a refrigerant with about half the GWP compared to what is currently used. These new offerings will be available in 2015-2016 in Europe, the Middle East, and Africa, and to the United States upon EPA approval of the alternative refrigerant. Thermo King reports that this alternative would avoid the equivalent of approximately 1.6 million metric tons of carbon dioxide in the US by 2020.

True Manufacturing, the largest manufacturer of self-contained commercial refrigeration in the nation, announced today that it commits to using only climate-friendly, low-GWP refrigerants and low-GWP blowing agents, in all future general use and refrigeration product development. Over the next five years True Manufacturing will develop low-GWP replacements for its existing products. True Manufacturing reports that these improvements will reduce emissions of climate-damaging HFCs by more than 200,000 million metric tons of CO2 equivalent.

New Executive Actions

The Administration's new actions will help promote the use of safer alternatives to HFCs and encourage the development of new technologies.

Promote the use of safer alternatives to HFCs in the Federal Government

Updating regulations for service and vendor contractors: The President has already directed Federal agencies to purchase safer and cleaner alternatives to HFCs whenever feasible and to transition to equipment that uses safer and more sustainable alternatives. Federal purchasers can enhance efforts to achieve this goal by procuring climate-friendly HFC alternatives, primarily in refrigeration and air conditioning equipment in Federal buildings. Today, the Administration will begin the formal process of reviewing revisions to Federal acquisition regulations to promote the use of safer chemical alternatives to HFCs by service and vendor contractors. To help agencies monitor progress, contractors will be asked to keep track of and report on the amounts of HFCs

added or removed during routine maintenance, repair or disposal of any government equipment, appliances or supplies.

Evaluating sustainable technologies in Federal buildings: As part of its Green Proving Ground (GPG) program, the U.S. General Services Administration is inviting technology manufacturers and industry stakeholders, including those that offer HFC alternatives, to submit information on innovative and transformational building technologies that can be used in Federal buildings. Technologies selected by the program, which conducts real-world evaluations of the performance of emerging building technologies to recommend deployment strategies towards achieving ambitious sustainability goals, will be matched with Federally-owned buildings to pilot measurement and verification by objective third-party evaluators. Results from these evaluations will inform public- and private-sector investment decisions, and will help accelerate commercialization and adoption within the Federal Government and the real estate industry.

Encourage private sector investment in low-emissions technology:

Driving the Market Towards Innovative Climate-Friendly HFC Alternatives: EPA will continue to expand the list of climate-friendly alternatives to both ozone-depleting substances and high-GWP HFCs, and is currently working on its next listing notice under the Significant New Alternatives Policy (SNAP) program, including both fluorinated and non-fluorinated alternatives that can be used in important sectors.

Organizing Sector Workshops: EPA and the Alliance for Responsible Atmospheric Policy will work with other interested governments, international agencies, private sector organizations and civil society to organize a series of sector-specific workshops. These workshops will provide an opportunity to share information on technologies, policies, and standards, will address the technical aspects of transition, including barriers that slow the uptake of alternatives, and will also include information on policy initiatives.

Engaging Stakeholders on Refrigerant Management Regulations: EPA received a petition from the Alliance for Responsible Atmospheric Policy to create consistent refrigerant management regulations by applying the same rules that already exist for ozone-depleting refrigerants to HFCs. EPA recognizes that refrigerant management is an important way to reduce climate-damaging emissions from equipment used for air-conditioning and refrigeration, and will engage with stakeholders as it explores options for addressing the petition.

Invest in new technologies to support safer alternatives to HFCs:

Funding Opportunities for HFC Alternatives: Today, the Department of Energy is announcing new funding for the research and development of technologies and approaches that lead to energy reductions in U.S. buildings. The funding will encourage next generation, efficient cooling technologies, including examining HVAC (heating, ventilation, and air conditioning) technologies that use alternative refrigerants and those that move beyond using refrigerants altogether. These technologies also have the potential to improve the efficiencies of other building equipment that rely on heat-pumping technologies (e.g., water heaters, refrigerators), in addition to HVAC equipment. This funding will accelerate the development of near-term

technologies that have the potential to save significant amounts of energy while also accelerating the development of the next generation of technologies that have the potential of “leapfrogging” existing technologies by pursuing entirely new approaches.