

October 26, 2018

U.S. Environmental Protection Agency
National Highway Traffic Safety Administration

Re: EPA-HQ-OAR-2018-0283
NHTSA-2018-0067
FRL-9981-74-OAR

Honeywell Fluorine Products appreciates the opportunity to provide comments in response to the proposed rule entitled “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2012-2026 Passenger Cars and Light Trucks,” issued by the U.S. Environmental Protection Agency (“EPA”) and the National Highway Traffic Safety Administration (“NHTSA”). 83 Fed. Reg. 42,986 (Aug. 24, 2018) (“SAFE Vehicles Rule” or “Proposed Rule”). The rule proposes to amend the existing Corporate Average Fuel Economy (“CAFE”) standards and the tailpipe greenhouse gas (“GHG”) standards applicable to model years 2021 through 2025.¹ EPA and NHTSA also propose new standards for model year (“MY”) 2026. *Id.* at 42,986.

Introduction

Honeywell Fluorine Products is a division of Honeywell International Inc., a global leader in providing energy efficiency technologies and innovations that can help the world address its energy and environmental challenges. Honeywell employs nearly 46,000 people in the United States. Its products and services respond to the urgent and complex challenges of energy security and environmental protection while driving economic growth through enhanced productivity. Honeywell has invested capital and years of employee time to develop a portfolio that delivers energy savings and efficiency across the residential, transportation, industrial, and commercial sectors. This portfolio includes a next-generation mobile air conditioning refrigerant, HFO-1234yf, which has a global warming potential (“GWP”) less than 1 and is a cost-effective option for reducing emissions of HFC-134a, which has a GWP of 1400. HFC-134a has long been a concern for policymakers because of its potency as a GHG.

Under the preferred option in the SAFE Vehicles Rule, the Proposed Rule would eliminate, after MY 2020,² the existing Air Conditioning Improvement Credit Program (“A/C Credit Program” or “Program”), which (among other things) allows vehicle manufacturers to earn compliance credits by using low-GWP air conditioning refrigerants like HFO-1234yf. As these comments

¹ We recognize that the proposal was issued jointly by NHTSA and EPA, but our comments are related almost entirely to EPA’s authority under the Clean Air Act (“CAA”) to regulate GHG emissions from cars and light trucks. Thus, throughout our comments, we will normally refer to what EPA has proposed or said in the proposal, even though both EPA and NHTSA are jointly responsible for the Proposed Rule and the statements made therein.

² In alternative scenarios 5 and 8 of the Proposed Rule, A/C credits for refrigerant leakage would be eliminated after MY 2021.

explain, the proposal to eliminate the Program makes no sense from a policy perspective and ignores the Agency's legal obligation to regulate all GHG emissions, not just carbon dioxide ("CO₂"), from the transportation sector. The proposal also fails to further EPA and NHTSA's goal of harmonizing the CAFE and CO₂ standards: as both agencies have acknowledged previously, the standards are already harmonized – even while including A/C refrigerant leakage credits.

The Proposed Rule fails to provide a rational basis for its proposal to eliminate the A/C Credit Program and impermissibly disregards well over \$1 billion of investment that U.S. industry has made in reliance on the existence of the Program through 2025. If EPA finalizes its proposal to abandon the Program, this abrupt and unwarranted change in EPA's long-standing regulatory program would harm U.S. manufacturers and endanger thousands of American manufacturing jobs. Looking forward, it would stifle investment and innovation as it puts manufacturers on notice that they cannot rely even on well-established regulatory programs when making business decisions.

Product suppliers like Honeywell fund the initial investments and the associated risk for developing new technologies for improving fuel efficiency and reducing emissions. They invest dollars today in reliance upon an acceptable return in the future. The roll-out of these complicated technologies requires substantial lead-time and major economic resources. A supplier's product planning and investment timeline includes several stages, each stage ranging from 6 months to 2 years depending on the technology, totaling in some cases up to a decade. Importantly, suppliers do not get paid until these technologies are deployed in the marketplace. Therefore, a significant delay in product adoption, shortening a product's anticipated lifespan, or curtailing demand jeopardizes investments. In the case of alternative air conditioning refrigerants, Honeywell and many other companies made significant investments several years ago in reliance on the implementation of the A/C Credit Program.

In this case, the manufacturing sector's reliance on the A/C Credit Program was more than reasonable because EPA has repeatedly reaffirmed the Program's effectiveness in reducing GHG emissions, the affected stakeholders strongly support the Program, and there was no reason to anticipate, until very recently, that it might be discontinued. In addition, as discussed further below, abandoning the Program would harm disproportionately U.S. companies, leaving them at a competitive disadvantage to their foreign competitors. For all these reasons, we urge EPA to leave the existing A/C Credit Program in place.

Furthermore, if the decision is made to drop the A/C Credit Program, it will not only jeopardize U.S. manufacturing jobs and over \$1 billion in investments made by U.S. companies, but it would also encourage the Chinese refrigerant industry to increase their dumping of the old refrigerant, HFC-134a, in the U.S. market. This outcome helps the Chinese increase their refrigerant plant utilization and profits at the expense of the American next generation refrigerant plants.

Lastly, the A/C Credit Program has given automobile manufacturers flexibility in fleet design and composition to meet consumers' needs and tastes while also meeting EPA's GHG standards. Since the implementation of the GHG standards, automakers and EPA have acknowledged that

the A/C Credit Program has facilitated the seamless transition to low-GWP refrigerants as a cost-effective approach for reducing GHG emissions from the transportation sector.

I. Background

EPA has recognized that vehicle air conditioning systems contribute to GHG emissions in two ways: (1) by leaking refrigerants that are themselves very potent GHGs (so-called “direct A/C emissions”); and (2) by placing an additional load on the engine and thus increasing tailpipe CO₂ emissions (“indirect A/C related emissions”). *See* Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, 75 Fed. Reg. 25,324, 25,339 (May 7, 2010) (“MY 2012-2016 Final Rule”).

In 2010, EPA established the A/C Credit Program, which allows auto manufacturers to generate credits by reducing either or both types of GHG emissions related to A/C systems. It did so by establishing “a method to calculate CO₂ equivalent reductions for the vehicle’s full useful life on a grams/mile basis that can be used as credits in meeting the fleet average CO₂ standards.” *Id.* EPA recognized at that time that “this approach provides manufacturers with a highly cost-effective way to achieve a portion of GHG emissions reductions under the EPA program,” *id.*, and that a “combination of two-cycle tailpipe emissions and air conditioning-related emissions in one program provides manufacturers greater flexibility to select the most cost-effective combination of control technology for their particular vehicles.” Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards: EPA Response to Comments Document for Joint Rulemaking at 3-18, EPA-420-R-10-012a (Apr. 2010), EPA-HQ-OAR-2009-0472-11581 (“Response to Comments on MY 2012-2016 Final Rule”).

As described in more detail below, for both legal and policy reasons, we believe that, regardless of the level at which NHTSA sets the CAFE standards, EPA should leave the A/C Credit Program in place for MY 2021-2026 to ensure continued emission reductions in non-CO₂ GHGs.

A. The Industry Transition Underway to Environmentally Preferable Refrigerants Owing Solely to the A/C Credit Program

For many years, mobile air conditioning systems in vehicles universally used hydrofluorocarbons (“HFC”) refrigerants, which are powerful GHGs. The most common HFC is R-134a, which has a GWP (global warming potential reference value) of 1430 – meaning that, when emitted into the atmosphere, a pound of R-134a is 1430 times more potent than a pound of CO₂ in terms of its impact on global warming. 77 Fed. Reg. 62,624, 62,804 (Oct. 15, 2012).

The primary alternatives to HFC refrigerants are hydrofluoro-olefin (“HFO”) refrigerants, which have a much lower GWP. HFO-1234yf is a near drop-in replacement for R-134a, and American companies spent years developing, patenting and ultimately commercializing this technology. HFO-1234yf provides excellent cooling performance and is just as effective as R-134a. Yet HFO-1234yf has a GWP of less than 1, which is lower than CO₂ and 99.9 percent lower than R-134a. *See* IPCC Working Group I, *Climate Change 2013: The Physical Science Basis* 732 (2013). Research has shown that vehicle air conditioning systems that use HFO-1234yf can be more effective than those that rely on HFC-134a. Thus, vehicles equipped with HFO-1234yf

systems use less fuel and help to reduce indirect GHG emissions as well as direct GHG emissions. See JAMA-JAPIA Consortium, New Refrigerants Evaluation Results, 2008 SAE Alternative Refrigerant Systems Symposium 36 (June 10-12, 2008), attached to these comments; see also Honeywell, Solstice YF: The Next-Generation Refrigerant for Automotive Air Conditioning 5, available at <https://www.fluorineproducts-honeywell.com/refrigerants/wp-content/uploads/2012/10/Honeywell-solstice-1234yf-brochure.pdf>.

Moreover, HFO-1234yf is easy and inexpensive for the auto industry to implement on assembly lines. As one Chrysler official confirmed “[t]he majority of the hardware is the same,” and the “service procedures will be identical” as HFC-134a. Elliot Maras, *MACS: Chrysler reports R-1234yf results in Jeep Cherokee*, <https://www.vehicleservicepros.com/in-the-bay/tools-equipment/news/11296735/macs-chrysler-reports-r1234yf-results-in-jeep-cherokee> (Jan. 2014). And the per vehicle cost of switching from HFC-134a to the low-GWP alternative HFO-1234yf has rapidly decreased from roughly \$68 in 2011, 77 Fed. Reg. at 62,666, to approximately \$33 now.

B. The Importance of the A/C Credit Program and EPA’s Obligation to Maintain It

EPA has an obligation to regulate several different GHGs that are emitted from cars and light trucks, including: (1) CO₂; (2) HFCs; (3) methane (CH₄); and (4) nitrous oxides (N₂O). EPA has previously identified HFCs as the largest non-CO₂ GHG emitted by mobile sources. 73 Fed. Reg. 44,353, 44,431 (July 30, 2008). At that time, HFC emissions from motor vehicles were 40 times greater than methane emissions and more than two times greater than N₂O emissions on a CO₂ equivalent (“CO₂e”) basis. In 2006, HFCs from mobile sources were 56% of total U.S. HFC emissions, making them the largest single source of U.S. HFC emissions. 75 Fed. Reg. at 25,398 n.155.

Although the A/C Credit Program already has encouraged a number of automakers to transition away from HFC refrigerants to next-generation HFOs, many auto manufacturers still use high-GWP HFCs in their air conditioning systems. In MY 2017, approximately 50% of the cars and light trucks sold in the U.S. were still using HFCs. EPA estimates that, in 2016, leakage of HFCs from cars and light trucks (i.e., “direct A/C emissions”) still represented 3.1% of their total GHG emissions. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2016* at 111, EPA-430-R-18-003 (Apr. 12, 2018), EPA-HQ-OAR-2018-0283-0731. EPA has also noted that A/C-related *indirect* emissions represent about 3.9% of the total GHGs from cars and light trucks. *Final Joint Technical Support Document for MY 2017-2025* at 5-3, EPA-420-R-12-901 (Aug. 2012), EPA-HQ-OAR-2018-0283-0654. In light of these facts, EPA has acknowledged the need to regulate GHG emissions from vehicle air conditioning systems:

It is important to address A/C direct and indirect emissions because the technologies that manufacturers will employ to reduce vehicle exhaust CO₂ will have little or no impact on A/C related emissions. Without addressing A/C related emissions, as vehicles become more efficient, the A/C related contribution will become a much larger portion of the overall vehicle GHG emissions.

75 Fed. Reg. at 25,425. EPA’s solution was to create the A/C Credit Program, which it first did as part of the MY 2012-2016 Final Rule, with both (1) CO₂e credits that recognize the GHG

benefits of eliminating or reducing leakage of high-GWP A/C refrigerants, and (2) CO₂ credits for the indirect emission reductions associated with improving the efficiency of A/C systems. *Id.* at 25,424-31.

The refrigerant leakage credits take into account various technologies that could be used to reduce GHG emissions from refrigerant leakage, including low-GWP refrigerants. 74 Fed. Reg. 49,454, 49,527 (Sept. 28, 2009). With regard to the use of low-GWP refrigerants, the credit amount is based on the GWP of the alternative refrigerants, meaning that the largest credits are available for refrigerants approaching a GWP of zero. 74 Fed. Reg. at 49,258. Although vehicle manufacturers are not required to use low-GWP refrigerants, the Program functions as “an additional program that credits manufacturers for implementing A/C technologies that result in real-world reductions in GHG emissions.” Manufacturer Performance Report for MY 2016 at 31, EPA-420-R-18-002 (Jan. 2018), EPA-HQ-OAR-2018-0283-0647.

After reviewing the public comments that it received on the Program, EPA noted that “[t]he HFC crediting scheme was widely supported.” 75 Fed. Reg. at 25,339. The Program allowed manufacturers to begin generating and using credits for improved A/C systems to assist with compliance with the CO₂ grams per mile (“g/mi”) standards beginning with MY 2012, and they could also trade the credits or bank them for future years, when the vehicle GHG standards would become more stringent.³ Manufacturer Performance Report for MY 2016 at 30.

Importantly, EPA set the CO₂ standards assuming that automakers would fully transition to HFO-1234yf over the life of the Program. In the MY 2017-2025 Final Rule, EPA noted that it:

expects all manufacturers will choose to use A/C improvement credit opportunities as a strategy for complying with the CO₂ standards, and has set the stringency of the proposed and final standards accordingly. EPA estimates that the average level of the credits earned will increase from 2017 (13 g/mile) to 2021 (21 g/mile) as more vehicles in the fleet convert to use of the new alternative refrigerant.

77 Fed. Reg. at 62,846 (cross-reference and footnote omitted). The Agency also noted that, its “estimated reductions from the A/C credit program assume that manufacturers will fully utilize the program (i.e., have 100% refrigerant replacement . . .) by MY 2021.” *Id.* at 62,891. This estimate was based on the assumption that the Program would remain in place through 2025, because manufacturers would be able to generate excess credits in the early years of the Program that they could use after MY 2021 to comply with increasingly stringent GHG standards that were established for post-2021 model years.

It is important to note that, although EPA did not mandate the use of low-GWP refrigerants, the Program was specifically designed to achieve the goal of phasing out HFCs in mobile A/C systems by MY 2021. By using a flexible credit-trading program instead of a command-and-control approach, the A/C Credit Program was designed to accomplish this goal at the lowest possible cost. It was not simply an “add-on” designed to get CO₂ emission reductions beyond

³ Manufacturers could also use the A/C Credit Program to generate early credits in MY 2009-2011. Manufacturer Performance Report for MY 2016 at 30.

those that would be achieved by the CAFE standards, but a program specifically designed to regulate GHGs other than CO₂.

C. The A/C Credit Program Is Cost-Effective and Provides Substantial Environmental and Economic Benefits as Well as Flexibility to U.S. Automakers

Compared to other regulatory options for reducing GHG emissions in the transportation sector, switching to low-GWP refrigerants is very cost-effective. This is evident from the fact that automakers have widely adopted these refrigerants as alternatives to HFC-134a. In MY 2013, only two manufacturers were using HFO-1234yf – accounting for approximately 42,000 vehicles. Manufacturer Performance Report for MY 2016 at 34. In contrast, fourteen manufacturers used HFO-1234yf in 2.2 million new vehicles in MY 2016 and reported A/C leakage credits totaling more than 20 million Mg of credits (or GHG reductions of 6 g/mi across the 2016 vehicle fleet). *Id.* at 35.⁴ This transition has resulted in real-world reductions to GHG emissions. In MY 2016 along, the new vehicles using HFO-1234yf resulted in an annual emissions reduction of approximately 1.89 million MT CO₂e (based on leakage of 10% of the total A/C charge each year) when compared to leakage from the same cars using HFC-134a.

As the chart below shows, since EPA created the A/C Credit Program, automakers have increasingly switched from HFC-134a to HFO-1234yf. Obviously, they would not have made the necessary investments to make this switch if they had more cost-effective options for meeting the applicable GHG standards.

⁴ Although some of these credits were for measures to reduce actual leakage rates, the majority of the credits generated in MY 2013 resulted from the use of low-GWP refrigerants.

MY18 U.S. Market Models with yf – FINAL						
	12 mos 2015 Units	12 mos 2016 Units	12 mos 2017 Units	Projected 2018 Units	Units with yf MY18	%WITH yf
BMW Total	405,715	366,428	354,110	354,110	354,110	100%
FCA Total	2,264,570	2,256,849	2,073,073	2,073,073	1,973,073	95%
Ford Total	2,602,835	2,599,211	2,575,111	2,600,111	1,769,727	68%
General Motors Total	3,082,366	3,042,775	3,002,237	3,002,237	2,902,237	97%
Honda Total	1,572,786	1,634,538	1,640,135	1,652,135	1,352,171	82%
Hyundai/KIA Total	1,387,528	1,422,603	1,275,223	1,285,223	554,650	43%
JLR Total	85,048	105,104	114,333	114,333	114,333	100%
Mazda Total	319,183	297,773	289,470	289,470	-	0%
Mercedes Benz Total	380,461	380,752	375,311	375,311	-	0%
Mitsubishi Total	95,342	96,267	103,686	103,686	-	0%
Nissan Total	1,472,193	1,563,672	1,592,885	1,592,885	-	0%
SUBARU Total	582,675	615,132	647,956	647,956	238,723	37%
TESLA Total	25,367	26,725	55,120	55,120	-	0%
Toyota Total	2,444,772	2,436,998	2,434,289	2,434,289	731,339	30%
VW Group Total	600,202	587,053	621,606	621,606	345,300	56%
Volvo Total	70,047	82,724	81,507	81,507	-	0%
TOTAL yf in MY18 US Models					10,335,663	
					60%	
17,236,052						
TOTAL yf in MY17 US Models					8,540,636	
					50%	

EPA itself has acknowledged the cost-effectiveness of the A/C Credit Program, stating, for example:

- “[S]uch improved A/C technologies tend to be relatively inexpensive compared to other GHG reducing technologies.” 77 Fed. Reg. at 62,804.
- “Achieving GHG reductions in the most cost-effective ways is a primary goal of the program, and EPA believes that allowing manufacturers to comply with the standards by using credits generated from incorporating A/C GHG reducing technologies is a key factor in meeting that goal.” *Id.* at 62,805.
- “About 40 percent of these [credits] were accrued through the use of the optional credit programs for air conditioning systems, indicating a significant, real-world benefit as a result of the introduction of the technologies underlying these optional credit programs.” Manufacturer Performance Report for MY 2012 at 11, EPA-420-R-14-011 (Apr. 2014), available at <https://bit.ly/2QGGEb>.

This transition – and the emission reductions it has achieved – is due almost entirely to the A/C Credit Program. If the Program is repealed, the transition would certainly be slowed and likely be stopped altogether. Although switching to low-GWP refrigerants is a cost-effective option for reducing GHG emissions, it is not without cost. Given the highly competitive nature of the automotive industry, where companies continually look for ways to reduce production costs by

even a few cents per vehicle, there would be competitive pressure for automakers to switch back to lower-cost HFCs. Thus, the elimination of A/C credits would not just stop the transition to next-generation refrigerants but threatens to reverse the substantial progress that has been made since the adoption of the Program in 2010.

As discussed further below, to produce this new class of refrigerants, American suppliers have invested well over \$1 billion to invent and commercialize these next-generation products as well as build world-scale manufacturing plants that employ hundreds of American workers. The refrigerant was developed in Buffalo, New York and is manufactured in Texas and Louisiana, creating hundreds of U.S. jobs. The American refrigerant industry is a global technological leader in this field, but it faces steep competition from industry in China. The A/C Credit Program enables American automakers buy American-made refrigerant instead of cheaper, more environmentally harmful foreign products.

D. Vehicle Manufacturers and Other Business Leaders Support the A/C Credit Program and Refrigerant Leakage Credits

The auto industry strongly supports the A/C Credit Program. The Alliance for Automobile Manufacturers, the Motor & Equipment Manufacturers Association (“MEMA”), Ford Motor Company, and several industry trade associations have expressed support for retaining the A/C Credit Program through MY 2026. Honeywell is not aware of any automaker that opposes the Program or has asked for it to be eliminated. Below is a sample of public statements from the auto industry:

- The Alliance “supports the continuation and expansion of flexibilities such as accounting for the benefits of air conditioning system efficiency improvements, accounting for new refrigerants with lower greenhouse gas impacts, and fully acknowledging the benefits of technologies that improve efficiency beyond what is measured in laboratory testing.” Statement of the Auto Alliance before the U.S. EPA and NHTSA Regarding their Notice of Proposed Rulemaking on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 for Passenger Cars and Light Trucks at 2 (September 24-25, 2018).
- MEMA “requests EPA retain the alternative mobile air-conditioning refrigerant credits through MY 2026. Refrigerant credits advance American technological leadership and allow the U.S. to maintain advantage over the industry in China. Continuation of these credit programs preserve long-term supplier technology investments and jobs and allows important compliance flexibilities.” Statement of MEMA Before the U.S. EPA and NHTSA Re: Notice of Proposed Rulemaking on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for the Model Years 2021-2026 for Passenger Cars and Light Trucks at 2 (September 24, 2018).
- “The [mobile air conditioning (MAC)] direct credits have been a success in accelerating real-world GHG emissions reductions The incentive created by pre-defined MAC credits has accelerated the U.S. HFC reduction program into a leading position worldwide, laying the groundwork for eventual phase-down of

high GWP automotive refrigerants.” Comments of Alliance of Automobile Manufacturers at 160-61 (Sept. 26, 2016), EPA-HQ-OAR-2015-0827-4089.

- “Ford supports the efforts of the EPA and NHTSA that bring together a range of compliance mechanisms such as improvements to vehicle fuel economy, improvements in air-conditioning systems designed to minimize refrigerant leakage (another potential source of greenhouse gases) and advanced technology vehicles that can run on biofuels and electricity.” Ford Motor Company Comments on Proposed MY 2012-2016 Rule at 4 (Nov. 24, 2009), EPA-HQ-OAR-2009-0472-7082.
- “The MAC program is a market-based tool that encourages the move away from high-polluting products in favor of next-generation American coolants. For manufacturers, eliminating the MAC program would come with a significant negative economic impact, and would harm manufacturers’ overall competitiveness. The NAM strongly recommends that EPA retain MAC credits in the final SAFE Vehicles Rule.” National Association of Manufacturers, Comments on Proposed SAFE Vehicles Rule at 3 (Oct. 26, 2018).
- “We urge EPA to retain the credits through MY2026. The auto industry widely supports the credits, and U.S. chemical manufacturers are at a loss as to why EPA would propose to eliminate such a successful flexible compliance program.” American Chemistry Council, Comments on Proposed SAFE Vehicles Rule at 9 (Oct. 10, 2018), EPA-HQ-OAR-2018-0283-1415.

Other American business leaders and policy analysts have also supported the A/C Credit Program as an important means of ensuring the global competitiveness of U.S. industry:

- “A major force in [the country’s current] economic rejuvenation has been President Trump’s decision to slash burdensome regulations President Trump has set his sights on reforming another major regulation: President Obama’s CAFE standards But there is one element of the regulation that he should keep, an element that – unlike the rest of the regulation – actually helps American industry: the mobile air conditioning (MAC) credit system. . . . American MAC technology is superior and better for the environment, which makes up for the lower gas mileage. But the credit is important for American industry in large part because American companies have invested more than \$1 billion to establish their superiority in MAC technology. With the credit, American car companies are more likely to buy American technology rather than second-rate refrigerant from abroad. Steve Forbes, *A Little Thing to Help Keep the Economy Humming – Here’s one EPA rule worth keeping*, FOX NEWS, <https://www.foxnews.com/opinion/steve-forbes-a-little-thing-to-help-keep-the-economy-humming-heres-one-epa-rule-worth-keeping> (Oct. 26, 2018).
- “One of the largest growth areas for [Weitron] is the automotive industry [T]he existing standards encouraged the transition away from the

older, polluting [air-conditioning] chemical to newer, cleaner products. The new products are made in America and have less impact on the environment. My customers have been moving away from outdated refrigerants. Encouraged by credits available for use toward compliance with the existing vehicle emissions standards, next-generation refrigerants . . . are a key driver of our growth, as well as many companies like ours. Because of the growing demand for American products, I invested in a brand-new [\$12.8 million] manufacturing plant in Everetts[, North Carolina] The building of our facility in North Carolina spurred additional economic development in the area But these jobs, economic successes and investments are all at risk if the refrigerant credits are eliminated in the vehicle emissions standards. Without the incentive to produce, our business and our industry will slow down immensely – to the benefit of foreign competitors and importers who are dumping Chinese products in the U.S. markets at the expense of American businesses. . . . Keeping the refrigerant credits as part of the fuel economy standards will allow our continued growth and our contribution to the American Dream. Let’s not turn our back on the economic and environmental progress American businesses have achieved over the last decade.” Deb Dayton, Pres., Weitron, Inc., *Threatening the American Dream, One Car at a Time*, THE DAILY REFLECTOR, <http://www.reflector.com/Op-Ed/2018/10/24/Threatening-the-American-Dream-One-Car-at-a-Time.html> (Oct. 24, 2018).

- “One of the ways the United States protects its status as global leader in the automotive industry is through the Mobile Air Conditioning (MAC) credit system that is part of the EPA’s auto emission standards program. By safeguarding the credits, President Trump can help preserve America’s global leadership in a growing market. The MAC credit system allows automakers who use an American refrigerant – rather than a Chinese or other foreign alternative – a credit of about one mile per gallon toward compliance with the EPA’s vehicle emissions standards. This voluntary incentive gives automakers options to meet the EPA standards, while producing cars and light trucks that Americans want. . . . The administration should keep the credits in place to ensure that the United States can maintain its position as global leader in this multibillion-dollar industry. Our leadership position in this field spurs innovation and investment, and keeps Americans working here at home. . . . Rolling back the MAC credit program would give an unfair advantage to foreign competitors, punishing the very job creators were willing to risk substantial resources to manufacture the refrigerant here in America.” Ken Blackwell, *Team Trump Should Serve American Manufacturing A Big ‘MAC,’* TOWNHALL, <https://townhall.com/columnists/kenblackwell/2018/09/11/team-trump-should-serve-american-manufacturing-a-big-mac-n2517692> (Sept. 11, 2018 12:01 AM).
- “With this credit system, automakers are incentivized to keep their business with American companies, while using a better, more advanced product in their automobiles. This is a legitimate and valuable incentive.” Bill Walton, Managing Partner, Rappahannock Ventures, *Another Crucial Fuel Regulation for President Trump to Roll Back*, REALCLEARENERGY, <https://www.realclearmarkets.com/articles/2018/10/26/>

[another crucial fuel regulation for president trump to roll back 103464.html](#) (Oct. 26, 2018).

II. The Proposed SAFE Vehicles Rule Does Not Provide a Defensible Basis for Eliminating the A/C Credit Program

In the course of any rulemaking, EPA has an obligation to “provide sufficient factual detail and rationale for the [proposed] rule to permit interested parties to comment meaningfully.” *United States Telecom. Ass’n v. FCC*, 825 F.3d 674, 700 (D.C. Cir. 2016) (quoting *Honeywell Int’l Inc. v. EPA*, 372 F.3d 441, 445 (D.C. Cir. 2004)). EPA must “disclose in detail the thinking that has animated” its proposal. *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977). Even more, “an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance.” *Motor Vehicle Mfrs. Ass’n v. State Farm Mutual Auto Ins. Co.*, 463 U.S. 29, 42 (1983). The Proposed Rule does not provide even a meaningful explanation, much less a reasoned analysis, for eliminating the A/C Credit Program.

The proposed SAFE Vehicles rule provides two reasons for eliminating the eight-year old A/C Credit Program: (1) a desire to “harmonize” the GHG program with the CAFE program, and (2) alleged “market distortions” caused by the Program. Although the proposal mentions these reasons, it does not provide *any* explanation for either of them. The proposal certainly does not “provide sufficient factual detail and rationale for the [proposed] rule to permit interested parties to comment meaningfully.”

A. The Mere Desire to Harmonize NHTSA and EPA Programs Is Legally Insufficient

EPA proposes to eliminate the A/C Credit Program “in the interests of harmonizing with the CAFE program.” 83 Fed. Reg. at 42,988. EPA does not explain, however, what it means by “harmonization” or why this is legally relevant under the CAA. Tellingly, the Proposed Rule does not discuss or even mention any issue or problem that EPA or NHTSA is trying to resolve because of any supposed “disharmony” caused by the A/C Credit Program.

As both EPA and NHTSA have recognized, although they are jointly conducting this rulemaking, they have different legal obligations and policy objectives. NHTSA is charged with improving vehicle fuel economy in order to reduce the petroleum used by cars and light trucks, and EPA is charged with reducing GHG emission from the same vehicles. Because of the correlation between fuel usage and CO₂ emissions, it makes sense to harmonize the NHTSA and EPA programs to the extent practicable. However, because EPA is required to regulate other GHG emissions besides CO₂ from cars and light trucks, the reach of these two programs cannot and should not be identical.

By eliminating the A/C Credit Program and other credits that have reduced (and if left in place, would continue to reduce) emissions of GHGs other than CO₂ from cars and light trucks, it appears that the purpose of the proposal is to make the EPA program essentially the same as the CAFE program. This is puzzling because, as EPA and NHTSA have recognized in the past, the two programs can certainly be harmonized without making them the same. In prior rulemakings,

when the two agencies have discussed the desirability of harmonizing the CAFE standards and the GHG emission standards, they have explicitly considered the A/C Credit Program and concluded that it did not in any way undermine this goal.

In the MY 2012-2016 and MY 2017-2025 rulemakings as well as in the course of the 2017 midterm evaluation (“MTE”), neither EPA nor NHTSA considered the A/C Credit Program to interfere with harmonizing their two programs. Rather, they recognized that “in reality auto companies will build a single fleet of vehicles to comply with both the CAFE and GHG standards, and the only significant real-world difference in program costs is limited to the hydrofluorocarbon (HFC) reductions expected under the GHG standards” 77 Fed. Reg. at 62,666. They noted that the MY 2017 Final Rule – which retained the A/C Credit Program – represented the agencies’ “joint analysis” and “joint deliberation” and their efforts to “harmonize and align their proposed standards to the greatest extent possible, consistent with their respective statutory authorities.” 77 Fed. Reg. at 63,054. As the agencies explained, manufacturers must “plan their compliance strategies considering both the NHTSA standards and the EPA standards and assure that they are in compliance with both, but they can still build a single fleet of vehicles to accomplish that goal.” *Id.* at 63,055.

More recently, in response to comments on the MTE draft Technical Assessment Report (“TAR”) that argued that the A/C leakage credits made EPA’s standards more stringent than NHTSA’s CAFE standards for automakers that are unable to generate credits, EPA expressly disagreed that the two standards are not harmonized:

EPA does not agree . . . that the programs are not harmonized due to the situation that some manufacturers may not maximize air conditioning refrigerant leakage credits. EPA does not believe this is an issue for the MTE because manufacturers will have had significant lead time to incorporate air conditioning refrigerant improvements including alternative refrigerants into their vehicles by MYs 2022-2025.

Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards under the Midterm Evaluation: Response to Comments at 158, 159, EPA-420-R-17-002 (Jan. 2017), EPA-HQ-OAR-2015-0827-6271.

In addition, EPA and NHTSA have recognized that differences between the agencies’ standards are necessary because, although “the CAFE and GHG programs overlap to a large degree,” “they in fact have two distinct purposes. One focuses on fuel consumption, while the other focuses on GHG emissions.” EPA Response to Comments on MY 2012-2016 Final Rule at 3-18. Unlike the Energy Policy and Conservation Act (“EPCA”), the CAA provides for compliance flexibilities “which may allow opportunities for more cost-effective regulatory approaches for GHG reductions.” EPA Response to Comments on MY 2012-2016 Final Rule at 3-18. The flexibility to “select the most cost effective combination of control technology for their particular vehicles . . . would not be possible with two separate programs due to the current inability of the CAFE program to accept increased air conditioning related controls in lieu of compliance with the CAFE standards” *Id.* at 3-17 to 3-18.

Finally, the proposed SAFE Vehicles Rule contains no explanation of what EPA and NHTSA are trying to achieve by making the two programs essentially the same. There is nothing in the rulemaking record to suggest, for example, this type of “harmonization” would reduce compliance costs, provide additional regulatory certainty, increase environmental benefits, or achieve any other public policy goal. Without any explanation of what the government is trying to achieve through “harmonization,” it is impossible to support or even comment meaningfully on the proposal to eliminate the A/C Credit Program. Moreover, unless EPA can provide a reasonable explanation of why “harmonization” requires the elimination of the A/C Credit Program and why this is a relevant consideration under the CAA, taking action to eliminate the Program would be unlawful.

B. Concerns About “Market Distortion” Are Unexplained and Unfounded

Aside from harmonization, the only other reason that EPA gives for proposing to eliminate the A/C Credit Program is that the current program “distorts the market.” Again, however, nothing in the proposal supports this assertion or explains how the A/C Credit Program distorts the market – or even identifies the market that is supposedly being distorted. We strongly disagree that the Program might in any way distort the market.

By setting a GHG emission standard and then allowing vehicle manufacturers to meet this standard in any way they choose (including by reducing refrigerant leakage or using low-GWP refrigerants), the A/C Credit Program continues to achieve the desired outcome (a given level of GHG reduction) in the most efficient way possible. A regulation can certainly distort the market if it gives an unwarranted advantage to certain companies or technologies – perhaps by giving regulated entities an incentive to use a technology that is not justified by a legitimate statutory objective (e.g., by giving overly generous credit to a particular technology as a way of encouraging its use).

But nothing in the rulemaking record suggests that the A/C credits are overly generous or in any way inappropriate, and EPA does not make this claim. As noted above, the value of the credits is based on a careful analysis of the per-vehicle GHG reduction (in terms of CO₂e) that a company would achieve by switching from HFC-134a to one of several low-GWP refrigerants, including HFO-1234yf. When a regulation establishes a performance standard and then allows regulated entities to meet it in any way they can (giving appropriate credit to all available compliance options), this does not in any way “distort the market.” Rather, it provides compliance flexibility and achieves the statutory objective at the lowest possible cost.

It has been suggested that the A/C Credit Program might somehow interfere with the CAFE program standards or undermine NHTSA’s effort to reduce U.S. fuel consumption, but this is based on a misunderstanding of how the Program works. Every vehicle manufacturer must comply with both the CAFE standards under EPCA and EPA’s GHG emission standards under the CAA. Because a vehicle’s CO₂ emissions may be correlated to its fuel consumption, it would be possible for EPA to set CO₂ emission standards that are equivalent to NHTSA’s CAFE standards. If this were the case, and if companies could get CO₂ credits for using low-GWP refrigerants under the EPA and the NHTSA programs, then this could undermine the CAFE program by allowing cars to use more fuel if they used low-GWP refrigerants. But this is *not* how the Program works. Companies cannot use A/C credits to comply with their obligations

under the CAFE program. Such credits can be used only to comply with EPA's GHG emission standards.

Because EPA has an obligation under the CAA to regulate all GHGs (and not just CO₂), its GHG emission standards go somewhat beyond the NHTSA's fuel economy standards. As noted above, a vehicle's CO₂ emissions are correlated to its fuel consumption, so it is possible to calculate a CO₂ emission standard expressed in gram per mile that is equivalent to a fuel economy standard. But EPA must regulate GHGs other than CO₂, so its GHG emission standards require automakers to do more than just meet the CAFE standards. As discussed above, the EPA and NHTSA regulatory requirements are still harmonized because they are fully consistent with each other, and EPA's emission standards do not require automakers to achieve better fuel economy than is required by NHTSA. Instead, automakers have a variety of options for meeting EPA's GHG emission standards – including through the use of low-GWP refrigerants.

When dealing with GHGs other than CO₂, policy-makers normally assign them “CO₂ equivalent” (or CO₂e) values based on their global warming potential. As noted above, HFC-134a has a GWP of 1430 – meaning that reducing a pound of HFC-134a emissions is equivalent to reducing 1430 pounds of CO₂ emissions. By using CO₂e values for its GHG emission standards, EPA allows automakers to meet these standards by controlling any combination of four different GHGs (CO₂, HFCs, CH₄, and N₂O). However, because they are also required to comply with the CAFE standards, they must meet most of their EPA obligation by improving the fuel economy of their vehicles (and thus controlling their CO₂ emissions).

To use a simple example, a company might be required to meet a fuel economy standard that is equivalent to 230 grams of CO₂ per mile (g/mi) and a somewhat more stringent GHG standard of 220 g/mi. Thus, to meet its obligation to NHTSA, it would have to achieve a GHG emission rate no higher than 230 g/mi. To meet its obligation to EPA and achieve a GHG emission rate of 220 g/mi, it would have to further reduce its GHG emissions by 10 g/mi. To do so, the company could further improve its fuel economy by the equivalent of 10 g/mi or choose from among other options that would reduce its CO₂e by 10 g/mi. Because EPA designed its program primarily to regulate HFCs, the Agency anticipated that, over time, most companies would choose to meet their GHG emissions standards by transitioning from HFC-134a to low-GWP refrigerants.

This credit program was designed specifically to allow EPA to meet its obligation to regulate non-CO₂ GHGs (including HFCs) from cars and light trucks. Although EPA did not require vehicle manufacturers to stop using HFCs, the A/C Credit Program gives them an appropriate regulatory incentive to do so. In the above example, a company could achieve the additional 10 g/mi reduction in CO₂e emissions by improving their fuel economy, but EPA anticipated that, over time, it would be less costly for virtually all companies to switch to low-GWP refrigerants.

Recent experience has shown that EPA was correct. As the GHG emission standards have become more stringent, more vehicle manufacturers are switching to low-GWP refrigerants. As expected, companies that have relatively more difficulty meeting GHG standards have been the first to make this transition, but EPA expected (correctly, we believe) that all companies would make this transition by MY 2021. By providing this compliance option, EPA is meeting its

statutory obligation to reduce all GHG emissions from cars and trucks – and doing so at the lowest possible cost. There is nothing about this program that “distorts the market.”

III. EPA Cannot Ignore Its Legal Obligation to Regulate GHGs Other Than CO₂

In response to the Supreme Court’s decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007), EPA made a formal regulatory finding that several different GHGs (including HFCs) emitted by cars and light trucks endanger public health and welfare. 74 Fed. Reg. 66,496 (Dec. 15, 2009). Because of this “endangerment finding,” EPA has a legal obligation under the CAA to regulate all these GHGs – not just CO₂. Eliminating the A/C Credit Program without putting anything in its place ignores this obligation.⁵ The non-statutory goal of “national harmonization” cannot overcome EPA’s statutory duty to regulate HFCs and other non-CO₂ GHGs emitted from mobile sources.

As EPA itself explains, the proposed SAFE Vehicles Rule is intended to implement Section 202(a)(1) of the CAA, which requires EPA to regulate emissions of any air pollutant from new motor vehicles that “in [the Administrator’s] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” 83 Fed. Reg. at 43,227 (quoting 42 U.S.C. § 7521(a)). The Agency has recognized that, in light of the 2009 endangerment finding that includes non-CO₂ GHGs, “EPA’s obligation to [regulate those pollutants] is mandatory.” *Id.* (citing *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 114 (D.C. Cir. 2012); *Massachusetts v. EPA*, 549 U.S. at 533).

EPA acknowledges these past findings and their statutory basis in the proposed SAFE Vehicles rule: “As a result [of the endangerment finding and EPA’s definition of ‘air pollution’ with respect to six GHGs], section 202(a) requires EPA to issue standards applicable to emissions of *that air pollutant*,” meaning the mix of 6 GHGs. 83 Fed. Reg. at 43,228 (emphasis in original). “Consequently, EPA has ***no discretion*** to decline to issue greenhouse gas standards under section 202(a) or to defer issuing such standards due to NHTSA’s regulatory authority to establish fuel economy standards.” *Id.* at 43,227 (emphasis added).

EPA also recognizes in the Proposed Rule that its “mandatory legal duty to promulgate these emission standards derives from ‘a statutory obligation wholly independent of DOT’s mandate to promote energy efficiency.’” *Id.* (quoting *Massachusetts v. EPA*, 549 U.S. at 532). NHTSA’s duty under EPCA is to “prescribe by regulation average fuel economy standards for automobiles manufactured by a manufacturer in that model year” that are “the maximum feasible” that NHTSA “decides the manufacturers can achieve in that model year.” 49 U.S.C. § 32902(a). 83 Fed. Reg. at 43,206. EPA has no discretion to defer regulating GHG emissions on the basis of NHTSA’s authority to regulate fuel economy. *See Coalition for Responsible Regulation*, 684 F.3d at 127.

In the proposal, EPA purports to issue standards and “other provisions” that control emissions from the four GHG pollutants emitted by new motor vehicles – CO₂, CH₄, N₂O, and HFC – but the Proposed Rule would eliminate all of these except the CO₂ standards. *See* 83 Fed. Reg. at 43,228, 43,193 n.366; *see also* 83 Fed. Reg. at 43,191 (“Today’s action would set standards that

⁵ EPA also proposes to eliminate tailpipe standards for CH₄ and N₂O. 83 Fed. Reg. at 42,988.

only apply to fuel economy and CO₂.”); 42,998 (“EPA is proposing to exclude air conditioning refrigerants and leakage, and nitrous oxide and methane emissions for compliance with CO₂ standards after model year 2020 . . .”).

EPA does suggest that, if the proposal to eliminate the A/C Credit Program is finalized, the Agency might go through a separate rulemaking to regulate N₂O, CH₄ and HFC emissions from cars and light trucks. 83 Fed. Reg. at 43,194. EPA does not, however, indicate when such a rule might be issued (or even proposed) or how it might work. Although EPA acknowledges the importance of ensuring there is no lapse in the availability of the A/C leakage credits, *id.*, such a proceeding would take time and needlessly introduce uncertainty to a well-established program. EPA has not proposed anything to date and would be hard-pressed to do so before the current proposal is finalized. Moreover, in the interim, the U.S. refrigerant and automotive industries will be left with uncertainty about the future of the Program. EPA can avoid these concerns by maintaining the current credit program.

From a legal perspective, we do not believe that EPA can justify the elimination of the A/C Credit Program by suggesting that it might at some point come up with a separate rule to regulate HFC emissions from cars and light trucks. And from a policy perspective, it makes no sense whatsoever to do so. There is a well-designed, cost-effective program to reduce vehicle HFC emissions that has been in place for almost a decade. It is working well and is supported by the regulated community, the environmental community, states, and U.S. automakers and chemical producers. We are not aware of any stakeholder who is opposed to it, and its cost to consumers is very low. This Program has survived legal scrutiny, and U.S. companies have invested billions of dollars in reliance on it. Surely, it would be arbitrary and capricious to eliminate such a program – particularly when no one has suggested a reasonable alternative to put in its place.

IV. Eliminating the A/C Credit Program Imperils American Investments Made in Good-faith Reliance on the Program

When an agency proposes to change long-standing policy, it must provide a reasoned explanation that explains the change and also accounts for any “serious reliance interests” the original policy engendered. *Encino Motorcars, LLC v. Navarro*, 136 S.Ct. 2117, 2125 (June 20, 2016); *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515–16 (2009). EPA has failed to account for the significant investments that Honeywell and other companies have made in reliance on the continuation of the A/C Credit Program through MY 2025.

A. EPA’s Program Has Engendered Serious Reliance Interests

1. The American chemical industry has made significant investments in reliance on the A/C Credit Program

Honeywell is one of the primary manufacturers of HFO-1234yf and has invested hundreds of millions of dollars in developing, producing, and commercializing this technology. To meet the growing demand for HFO-1234yf (caused largely by the A/C Credit Program), Honeywell also invested \$300 million to construct a new manufacturing plant in Geismar, Louisiana. During construction, the workforce in Geismar increased by more than 20 percent and the plant supported nearly 1,400 construction jobs. *See* Press Release (May 16, 2017), *available*

<https://www.honeywell.com/newsroom/pressreleases/2017/05/honeywell-starts-up-300-million-automotive-refrigerant-production-facility-in-louisiana>. When the plant began operations in 2017, it created hundreds of long-term, high value, sustainable jobs for the local area. See Louisiana Economic Development, Press Release (May 16, 2017), available at [https://www.opportunitylouisiana.com/led-news/news-releases/news/2017/05/16/honeywell-dedicates-\\$300-million-mobile-refrigerants-facility-in-louisiana](https://www.opportunitylouisiana.com/led-news/news-releases/news/2017/05/16/honeywell-dedicates-$300-million-mobile-refrigerants-facility-in-louisiana).

Chemours has also invested heavily in a new HFO-1234yf production facility in Corpus Christi, Texas, which broke ground last year. See Press Release (Feb. 2, 2017), available at https://www.chemours.com/Refrigerants/en_US/assets/downloads/2017-0202-new-production-facility-opteon-refrigerants.pdf.

In summary, in developing and producing this new class of refrigerants, American suppliers have invested well over \$1 billion to invent, commercialize and build world-scale manufacturing plants that employ hundreds of American workers. The refrigerant was developed in Buffalo, New York and is now manufactured in Texas and Louisiana. If EPA discontinues the A/C refrigerant leakage credits, it may jeopardize hundreds of U.S. jobs, future investments and American leadership regarding this technology.

2. *The American auto industry has made significant investments in reliance on the A/C Credit Program*

As noted above, although switching to low-GWP refrigerants is a cost-effective option for reducing GHG emissions, it is not without cost. The American automotive industry has also made substantial investments in reliance on the A/C Credit Program. In response to changes proposed to the A/C Credit Program in the MY 2017-2025 rulemaking, the Alliance of Automobile Manufacturers explained that:

Manufacturers have invested millions of dollars to change the designs of their vehicles and their assembly plants to bear the added cost of the new refrigerant in order to earn these credits. This new proposal to potentially reduce the amount of credit from a switch in refrigerant changes the cost-benefit equation from making this switch. This unfairly penalizes early adopters by undercutting the value derived from the credits from their decisions to switch rapidly to a new refrigerant, when a slower changeover might have been preferred under the new proposed rules.

Alliance of Automobile Manufacturers Comments on Proposed MY 2017-2025 Rule, App'x 3 at 14-15 (Feb. 3, 2012), EPA-HQ-OAR-2010-0799-9487. A 2014 survey submitted to ten automobile manufacturers, representing 85% of the light-duty vehicles sold in the U.S. in MY 2013, found that out of 139 vehicle platforms, manufacturers planned to transition 90% of the models to low-GWP refrigerant by MY 2021. 80 Fed. Reg. 42,870, 42,892 (July 20, 2015). This forecast was premised on the availability of credits and would be sure to change if the A/C Credit Program is eliminated as the availability of the Program has given American automakers a compelling reason to invest heavily in using American-made refrigerants. Eliminating the A/C refrigerant leakage credits would undermine their plans and investments in transitioning almost entirely to low-GWP HFO-1234yf.

The Manufacturer Performance Report for MY 2016 also demonstrates the significant reliance of automakers. Under the A/C Credit Program, Fiat Chrysler, GM, Honda, and Jaguar Land Rover have all increased their production of vehicles using HFO-1234yf in one or more recent years. *See* Manufacturer Performance Report for MY 2016 at 34. In fact, Jaguar used HFO-1234yf in 100% of its vehicles in 2016. *Id.* “Industry-wide, 13 percent of MY 2016 vehicles are using HFO-1234yf,” and a total of 4.6 million vehicles that were manufactured between MY 2013 and 2016 use HFO-1234yf. *Manufacturers Report for MY 2016 at 34, 35 tbl. 3-11.* Manufacturers’ reliance on the A/C Credit Program is clear from the fact that, for MY 2016, 14 manufacturers reported generating more than 20 million Mg of A/C leakage credits, accounting for GHG reductions of 6 g/mi across the 2016 vehicle fleet. *Id.* at 36, tbl. 3-12.

In addition to vehicle manufacturers, many other parts of the automotive industry have made investment decisions in reliance on the A/C Credit Program. Air conditioning system suppliers and other companies further downstream in the supply chain (such as manufacturers of hoses, and gaskets, and other parts used in mobile A/C Systems) have also made investments and other business decisions based on the reasonable assumption that automakers would continue their transition away from HFCs. And large and small businesses that repair or service automobile A/C systems throughout the country have purchased new equipment and supplies needed to service systems that use HFO-1234yf and other low-GWP refrigerants. All these companies throughout the manufacturing chain have made decisions in reliance on the A/C Credit Program. Their legitimate reliance interests would be harmed by the elimination of the A/C Credit Program.

B. Reliance by Manufacturers on the A/C Credit Program Was Reasonable

Honeywell and other companies that invested tremendous resources in reliance on the A/C Credit Program did so reasonably: there was no reason to suspect that EPA might eliminate the leakage credits. EPA established the Program in 2010, *see e.g.*, 75 Fed. Reg. at 25,396; continued it with minor adjustments in the 2012 rulemaking for MY 2017-2025, 77 Fed. Reg. at 62,628; and concluded in the 2017 MTE process that the Program was cost-effective and working well, *see* Draft TAR at 5-216 to 5-218.

As explained in some detail in the January 2017 MTE Final Determination, the purpose of the MTE is to “determine whether the GHG standards for MY 2022-2025, established in 2012, are still appropriate, within the meaning of CAA section 202(a)(1), in light of the record before the Administrator, given the latest available data and information.” Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation, EPA-420-R-16-020 at 1 (Nov. 2016); 40 C.F.R. § 86.1818-12(h). The MTE must entail a “holistic assessment of all of the factors considered in setting standards,” and “the expected impact of those factors on manufacturers’ ability to comply, without placing decisive weight on any particular factor or projection.” 77 Fed. Reg. at 62,784.

The factors that EPA is authorized to consider during the MTE process are established by regulation:

- (i) The availability and effectiveness of technology, and the appropriate lead time for introduction of technology;
- (ii) The cost on the producers or purchasers of new motor vehicles or new motor vehicle engines;
- (iii) The feasibility and practicability of the standards;
- (iv) The impact of the standards on reduction of emissions, oil conservation, energy security, and fuel savings by consumers;
- (v) The impact of the standards on the automobile industry;
- (vi) The impacts of the standards on automobile safety;
- (vii) The impact of the greenhouse gas emission standards on the Corporate Average Fuel Economy standards and a national harmonized program; and
- (viii) The impact of the standards on other relevant factors.

40 C.F.R. § 86.1818-12(h)(1). None of these factors suggested that the A/C Credit Program might be eliminated as part of the MTE. In fact, as the records for the MY 2017-2025 Final Rule and the 2017 MTE show (and as summarized in these comments) factors (i)-(v) weigh strongly in favor of keeping the existing credit program. There is sufficient production capacity of HFO-1234yf to allow automakers to continue to transition to this low-GWP refrigerant. The A/C Credit Program provides the U.S. auto industry a cost-effective means of reducing GHGs other than CO₂, thereby increasing the feasibility and practicability of the standards and reducing a significant source of HFCs. And, as discussed above, EPA and NHTSA have repeatedly concluded that factor (vii) is of no concern because the A/C Credit Program does not undermine the harmony between the CAFE standards and the CO₂ standards.

Honeywell and others could not have anticipated that the A/C Credit Program might be eliminated as a result of the MTE because no one challenged or objected to the A/C Credit Program in comments on any of the technical or policy documents that were issued for public comment as part of the MTE. Nor did EPA or NHTSA ever suggest, in any of these documents, that they were considering the possibility of eliminating the Program. *See* Draft TAR: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel economy Standards for Model Years 2022-2025, EPA-420-D-16-900 (July 2016), EPA-HQ-OAR-2018-0283-0203; Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation, EPA-420-R-016-020 (Nov. 2016), EPA-HQ-OAR-2015-0827-5942; EPA's August 2017 notice that it would reconsider the Final Determination, 82 Fed. Reg. 39,551 (Aug. 21, 2017).

Moreover, the Draft TAR found the A/C Credit Program to be working very well. At that time, EPA found that 15 manufacturers reported generating A/C leakage credits for MY 2014, amounting to more than 16.5 Mg of credits, or more than 40% of the total net credits reported for the model year and 5 g/mi across the 2014 vehicle fleet. Draft TAR at 5-216. EPA affirmed that “the stringency of the MY 2021 and later light duty GHG standards is predicated on 100 percent substitution of refrigerants with lower GWPs than HFC-134a,” *id.* at 5-217, and it concluded that (among other things) “the current trends among automakers toward the use of alternative refrigerants to comply with the LD vehicle GHG standards” and “the parallel increase in the supply of the leading refrigerant ensure that our earlier projections that a complete transition to alternative refrigerants by MY 2021 will in fact become reality.” *Id.* at 5-218. EPA noted that:

Additional information that has become available, as well as changes in the overall regulatory environment affecting the A/C technology developments in the light-duty vehicle industry, reinforces our earlier conclusions that these technologies will continue to expand and play an increasing role in overall vehicle GHG reductions and regulatory compliance.

Draft TAR at 5-208. In short, all data indicated that the A/C Credit Program was doing exactly what it was designed to do: achieve cost-effective reduction in GHG emissions and provide compliance flexibility to the auto industry to ensure feasible and practicable compliance with the MY 2021-2025 standards. EPA has not put forth any new technical information or data in the Administrative Record that questions or contradicts this conclusion.

V. Eliminating the A/C Credit Program Would Provide an Unfair Advantage to Foreign Companies and Endanger American Manufacturing Jobs

A. Eliminating the A/C Credit Program Would Disadvantage U.S. Chemical Producers

Eliminating the A/C refrigerant leakage credits would disadvantage U.S. chemical producers. This Program helps American industry maintain its technological leadership and advantage over Chinese competitors. American companies have invested years developing, patenting, and ultimately commercializing innovative refrigerant technology. At the same time, foreign companies leveraged China's abundant supply of raw materials to dump their outdated products in the United States.⁶

U.S. anti-dumping duties levied in response to this behavior have helped to level the playing field, but EPA's refrigerant leakage credits remain vital to the continuing transition to American-made and more environmentally friendly innovative refrigerants. Eliminating the A/C refrigerant leakage credit will benefit Chinese manufacturers at the significant expense of American industry.

B. Eliminating the A/C Credit Program Would Disadvantage U.S. Automakers

Eliminating the refrigerant leakage credits puts the U.S. auto industry at a competitive disadvantage. The A/C Credit Program provides compliance flexibility so that U.S. automakers can produce the vehicles – like light trucks – that American consumers want. Automakers receive credit in an amount of 13.8 g/mi for cars and 17.2 g/mi for trucks for adopting next-generation refrigerants. This is one of the highest values of any credit offered in EPA's Program

⁶ An investigation by the U.S. Department of Commerce determined that Chinese producers were dumping HFC-134a at less than fair value, 82 Fed. Reg. 12,192 (March 1, 2017), and the International Trade Commission later determined that these imports materially injured small and large American manufacturing and distributing companies. See Letter to Ronald Lorentzen, Acting Assistant Secretary of Commerce for Enforcement and Compliance, from Rhonda K Schmidlein, Chairman of the U.S. International Trade Commission, regarding R134a from China (April 5, 2017). The Commerce Department issued an antidumping order on April 19, 2017. 82 Fed. Reg. 18,422.

and represents real-world reductions in GHG emissions. More importantly, transitioning to innovative, low-GWP refrigerants is a simple and cost-effective solution because installing the necessary equipment to adopt next-generation refrigerants at the manufacturing plant is relatively easy to do on the assembly line, and the cost of using it in new cars is minimal.

C. Eliminating the A/C Credit Program Could Jeopardize Other U.S. Manufacturing Jobs

The existing A/C Credit Program provides a meaningful incentive for automakers to continue the transition to next-generation refrigerants developed under the leadership and through the innovation of American companies. American automakers have widely embraced the A/C Credit Program since it became part of the regulatory structure in 2010, and U.S. chemical producers and their suppliers have invested well over \$1 billion to develop and commercialize these next-generation products as well as build world-scale manufacturing plants that employ hundreds of American workers in reliance on the availability of refrigerant leakage credits. Developing and manufacturing next-generation refrigerant has created jobs in Buffalo, New York and in Texas and Louisiana. Eliminating the availability of A/C refrigerant leakage credits will almost certainly decrease demand for these products, which would undermine future investments and American leadership in this area.

Conclusion

EPA has a legal obligation to control emissions of all GHGs from the transportation sector – not just emissions of CO₂. The A/C Credit Program has proven to be an effective way of reducing HFC emissions from this sector – emissions that are potent GHGs and second in importance to CO₂ in terms of their impact on global warming.

The Proposed Rule has not even provided a meaningful discussion of its rationale for proposing to eliminate the A/C Credit Program – much less a “reasoned analysis” – and there is nothing in the administrative record to justify the elimination of the Program. To the contrary, the record clearly demonstrates that the A/C Credit Program is a cost-effective approach for reducing GHG emissions from cars and light trucks and satisfying EPA’s obligation to regulate GHGs other than CO₂.

Eliminating the Program will harm American companies who have made significant investments in reliance on the continuation of the Program through at least MY 2025. Regardless of the final decision on the stringency of the CAFE standards, Honeywell strongly urges EPA to retain the current A/C Credit Program, including the credits earned through the use of low-GWP refrigerants.