

Comments on the American Innovation and Manufacturing Act of 2019 (S. 2754)

U.S. Senate Committee on Environment and Public Works

April 8, 2020

Thank you for the opportunity to comment on the American Innovation and Manufacturing Act of 2019 (S.2754). The views I express in this comment are my own and should not be construed as representing any official position of The Heritage Foundation.

S. 2754 is a legislative proposal to phase down hydrofluorocarbons (HFCs), an objective of the Kigali Amendment to the Montreal Protocol. The 1987 Montreal Protocol was an agreement to phase out production of chlorofluorocarbons (CFCs), believed harmful to the ozone layer. The Kigali Amendment is a United Nations treaty that would ban CFCs' replacement, hydrofluorocarbons (HFCs) and substitute hydrofluoro-olefins (HFOs).

Generally, the legislation aims to “create jobs and drive innovation and economic growth in the United States by supporting and promoting the manufacture of next-generation technologies, including refrigerants, solvents, fire suppressants, foam blowing agents, aerosols, and propellants.”¹

The reality is that the cost of the phase out would likely come at significant cost to American families and businesses. New air conditioning units for homeowners as well as car owners will be significantly more expensive. In addition, maintenance and repairs of the hundreds of millions of existing HFC-using units would likely increase as the supply of HFCs dwindles and prices rise. HFO refrigerants are 10 times more expensive.² The actual price increases may prove lower over time, but they are almost certain to be significant.

Commercial air conditioning units would also be subject to the phase out, which would adversely affect every business that has such a unit. For example, Laura Mandala, CEO of Mandala Research, pointed out the impacts the phase out would have on the hotel industry and how those costs would be passed onto consumers: “Alternatives will be more expensive and may require equipment replacement and modification. It is not unreasonable to expect that the costs associated with this will ultimately get reflected in hotels' average daily rate.”³ The hotel industry is just one of countless industries that will increase its prices to pay for pricier air conditioning. Millions of small businesses that rely on air conditioning and refrigeration, such as restaurants and convenience stores, will be similarly impacted -- as will their customers.

¹S.2754 - American Innovation and Manufacturing Act of 2019, <https://www.congress.gov/bill/116th-congress/senate-bill/2754/titles>

² David Sherry and Maria Nolan (Nolan Sherry & Associates -- NSA), Stephen Seidel (Center for Climate and Energy Solutions – C2ES) and Stephen O. Andersen (Institute for Governance & Sustainable Development -- IGSD), <https://www.c2es.org/site/assets/uploads/2017/04/hfo-1234yf-examination-projected-long-term-costs-production.pdf>

³ David Eisen, “Phasing out of HFCs to have impact on hotel industry,” Hotel Management, October 18, 2016, <https://www.hotelmanagement.net/operate/phasing-out-hfcs-to-have-impact-hotel-industry> (accessed April 8, 2020).

Proponents of an HFC phase out argue that alternatives already exist, are close to market and will price will come down through a scheduled phase out. They argue it will create jobs. Regulations are not jobs creators. Forcing a new refrigerant on consumers means businesses will have to comply with the new regulation. However, households and businesses are forced to purchase new air-conditioning and refrigeration systems that use new alternative coolants, HFO manufacturers, equipment manufacturers, and maintenance and repair industries will all stand to benefit.

What the industry-funded studies touting job and economic growth is the opportunity cost of the regulation. HFC alternatives are significantly more expensive. Even if the costs for HFOs or other alternatives fall over time with more widespread use, that's hundreds of dollars more for a family to fix or replace an air conditioner. Alternatively, the family could have spent that money on a vacation or at the grocery store.

On the other hand, the regulation will prevent the hotel from hiring a new employee, or a restaurant from expanding its kitchen—or consumers will just bear the added costs as room rates and menu prices increase. Regulations force businesses to spend money that could have otherwise been spent elsewhere in the economy. On net, the economic costs of S. 2754 will outweigh the benefits.

The input-output model makes the case that Kigali and S. 2754 would produce economic gains by including “induced output,” which “represents the additional demand generated by the disposable income earned in the industry.” In other words, those who work in the industry that would benefit from the regulation would receive higher incomes, and they'll spend that money elsewhere, creating a positive ripple effect throughout the economy.

But again, an input-output economic analysis ignores where a family could have spent their money absent the regulation, and the ripple effect that spending would have had. If instead of paying for an exorbitantly more expensive air-conditioning unit, the family took a vacation to Florida, the disposable incomes of the resort employees would similarly increase and they would spend their higher paychecks on a new bike and so on.

The difference is, one scenario is the market allowing for choice while the other involves an international body forcing decisions on households and businesses. One involves wealth creation, the other involves wealth erosion.

If HFC alternatives are more cost effective, a government-forced phase out will not be necessary. Rather than have phase out through regulation, adoption of new, innovative refrigerants and technologies will happen organically if the government does not squeeze out the competition. A government forced phase out will only serve to create captive customers rather than have companies be subject competition. It is that competition and response to price signals in an open market that will drive job creation and the adoption more efficient technologies.

If enacted, the federal government would have unilateral authority to significantly speed up the phase out period. As Competitive Enterprise Institute Senior Fellow Ben Lieberman notes, “Section 7, entitled “Accelerated Schedule,” sets out a process by which the Environmental

Protection Agency (EPA) can easily reduce the window to as little as four years. Even if the EPA were to refuse to shorten the timelines, the extremely broad citizen suit provisions (discussed in a separate section) virtually guarantee that environmental advocacy groups will try to force them to do so through litigation.”⁴

While S. 2754 focuses on the United States, the phase out of HFCs will be especially hard on developing countries – whose populations often do not have incomes sufficient to provide widespread use of refrigeration and air conditioning and experience some of the hottest weather. For example, only an estimated five to ten percent of the Indian population uses air conditioning.⁵ Ajay Mathur, the director general of the Energy and Resources Institute in New Delhi told the *New York Times* that when Indians receive pay raises, air conditioning unit sales increase tremendously because they can afford pay for the unit and higher energy bills. Mathur said, “It is me of 10 years ago. It is many of my younger colleagues. It is my driver, who after 20 years working for me bought his first air-conditioner. It is a marker of social mobility.”⁶

A September 2016 study from the South Asian non-profit Council on Energy, Environment and Water projects the cost range of India’s compliance at \$13 to \$38 billion, depending on how the phase out occurs.⁷ The rest of the developing world whose citizens are striving to purchase their first air conditional face similar costs increases. An HFC phase out could make that social mobility for the world’s poorest citizens even more challenging.

In total, a study in the *Environmental Science & Policy* Journal estimates the costs of complying with the Kigali amendment from the years 2018-2050 could be as high as \$350 billion euros (\$428 billion).⁸ The same study also projects a possible net savings of \$240 euros (\$294 billion); however, the study assumes energy efficiency improvements in new air conditioners and refrigerators and thus lower operating costs. However, those efficiency improvements are not because of ban on HFCs, so they would have happened anyway. Indeed, if there are savings or efficiency improvements from using HFOs consumers will shift of their own volition without the need for government phase outs.

⁴Ben Lieberman, “Comments of the Competitive Enterprise Institute on S. 2754, the American Innovation and Manufacturing Act of 2019 Senate Committee on Environment and Public Works April 6, 2020,” The Competitive Enterprise Institute, April 6, 2020, <https://cei.org/content/comments-competitive-enterprise-institute-s-2754-american-innovation-and-manufacturing-act> (accessed April 8, 2020).

⁵ Josh Dzieza, “The Race Against Heat,” *The Verge*, September 14, 2017, <https://www.theverge.com/2017/9/14/16290934/india-air-conditioner-cooler-design-climate-change-cept-symphony> (accessed April 8, 2020).

⁶ Ellen Barry and Coral Davenport, “Emerging Climate Accord Could Push A/C Out of Sweltering India’s Reach,” *The New York Times*, October 12, 2016, https://www.nytimes.com/2016/10/13/world/asia/india-air-conditioning.html?_r=0 (accessed April 8, 2020).

⁷ Pallav Purohit, Lena Hoglund-Isaksson, Imrich Bertok, Vaibhav Chaturvedi, and Mohit Sharma, “Scenario Analysis for HFC Emissions in India: Mitigation potential and costs,” International Institute for Applied Systems Analysis, September 2016, <http://pure.iiasa.ac.at/id/eprint/13861/> (accessed April 8, 2020).

⁸ Lena Höglund Isaksson, et al, “Cost estimates of the Kigali Amendment to phase-down hydrofluorocarbons,” *Environmental Science & Policy* Volume 75, September 2017, Pages 138-147, <https://www.sciencedirect.com/science/article/pii/S146290111730120X?via%3Dihub#abs0010> (accessed April 8, 2020).

Proponents of Kigali have also asserted that failure to ratify the Kigali amendment and phasing out HFCs will disadvantage American companies. Paul Bledsoe, a former climate adviser for President Bill Clinton, said, “Now the question is, will the U.S. ratify the amendment so American chemical companies can gain full access to new global markets for replacement chemicals.”⁹ However, failure to ratify the Kigali amendment would not prevent U.S. companies from selling Kigali-compliant products to other countries that have chosen to phase out HFCs. So long as a domestic company chooses to produce HFOs or a different alternative compliant with the stipulations in Kigali, they could sell their product to any of those countries, including within the U.S.

But refusing to phase out HFCs and ratify Kigali will ensure that Americans have more choices. Homeowners or businesses confronted with purchasing or repairing a new air conditioner or commercial unit will have the option of purchasing HFCs or costlier HFOs. Senate advice and consent to and U.S. ratification of the Kigali amendment may benefit a select few companies who want to squeeze out their competitors through the treaty imposed regulation, but it will not be to the benefit of a large majority of Americans and citizens of the world who benefit from the option to purchase cheaper alternatives.

Thank you for this opportunity to discuss S.2754. I look forward to any questions you may have.

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⁹Somini Sengupta, “Treaty to Phase Out ‘Greenhouse Gases on Steroids’ to Enter Force,” The New York Times, November 17, 2017, <https://www.nytimes.com/2017/11/17/climate/hfcs-montreal-protocol.html> (accessed April 8, 2020).

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