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Good morning to the Chairs and the Committees. I am J. Drake Hamilton, Science Policy Director at Minnesota independent nonprofit, Fresh Energy. Fresh Energy is speeding Minnesota's transition to a clean energy economy, which will ensure Minnesotans enjoy good health, a vibrant economy, and thriving communities for generations to come.

The last President in December signed into law the most significant climate legislation passed in our country since 2009, over 10 years ago. The law requires companies to cut their production and use of super-pollutant hydrofluorocarbons (HFCs). These are powerful greenhouse gases used in refrigeration and in air conditioning. They must be cut by 2036 to only 15% of 2012 levels (an 85% reduction).

Here in Minnesota, phasing down HFCs has been of great importance to the Climate Change Subcabinet.

HFCs are refrigerants to cool cars and buildings, insulating foam blowing agents, and propellants used in some aerosol products. This legislation to phase down HFCs had bipartisan support. It was introduced by Republican Senator John Kennedy of Louisiana and Democratic Senator Tom Carper of Delaware. The bipartisan HFC regulations enjoyed wide support from both industry stakeholders and the environmental community. The bill was supported by the Air Conditioning, Heating, and Refrigeration Institute, the U.S. Chamber of Commerce, and the Association of Manufacturers. In Minnesota, Honeywell has supported HFCs phasedown. So have companies with footprints in Minnesota, including Trane, Dow in Edina, Daikin in Plymouth and in Faribault, and Lennox in Mendota Heights. Neither the industry nor the consumers stand to lose from an HFC phasedown.

That is because products containing climate-friendly alternatives to HFCs are already available, many of them made in the United States. These alternatives are cheaper than the HFCs. The alternatives are often more energy-efficient than the HFCs they will replace.

Pound for pound, HFCs have hundreds or thousands of times the heat-trapping capacity of carbon dioxide. HFCs are short-lived climate pollutants—once in the atmosphere, they decompose within a couple of decades. Therefore, reducing their emissions will result in a rapid decrease in their atmospheric concentrations, and the environmental benefits—including benefits to Minnesotans' health—will materialize in the near future. The release this month of the MPCAs GHG report made clear that Minnesota is not on track to meet our climate goals.

Phasing down HFC use will avoid almost 1 degree F of climate change globally. That will greatly help the U.S., and the world, meet the goal of limiting climate change to 2.7 degrees F. We estimate that the global phasedown now in progress will be equal to eliminating 70 billion tons of CO₂ over the next 35 years. That is equivalent to knocking out the entire planet's carbon emissions for more than two years. In the U.S. alone, that's comparable to taking 20 millions cars off the roads.

The use of HFCs has been growing rapidly, in both developed and developing nations, much more rapidly than carbon dioxide emissions. Their use is expected to triple in the next few years because more people are buying air conditioners.

Minnesota's 2016 HFC emissions, tabulated in MPCA's greenhouse gas inventory, totaled 2.8 million tons. At a social cost of \$40 per ton, the Minnesota benefits will be \$48 million in 2025, and \$76.8 million in 2030. Many of those benefits will be health benefits to Minnesotans.

The new bipartisan American climate law will cut off the rampant growth of HFCs and replace them with a new generation of alternative chemicals and products that use less energy, and produce less pollution. It is a win for human health.

Thank you very much. I will be ready to answer any questions.