

Prepared remarks

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August 2018 set an awful record for the globe: Scientists at NOAA reported the 404th consecutive month with temperatures above the 20th century average. 404 months in a row when the globe's temperature was never cooler than the long-term average. That means, anyone you know who is 33 years old or younger, has never lived a month without global warming. Climate change is one of the most urgent humanitarian and environmental crises of our time. That's why I work at Fresh Energy on global warming solutions at the scale of the problem.

Fresh Energy is a nonprofit, nonpartisan organization, home-grown here in Minnesota. For 26 years we've focused on building an economy we thrive in and energy that ensures our well-being. We work to dramatically increase the efficiency of Minnesota's homes and commercial buildings, and help our state transition from coal and other fossil fuels to clean electricity sources like wind, solar, and batteries. Our work aims to expand clean electricity to power more of the economy, including buses and cars. Most important: Fresh Energy works to ensure equitable access to energy solutions for people of all incomes.

Because each year we have advanced major policies that result in deep carbon reductions, I was invited to Greece this July to give the keynote address at a climate justice conference. I had the honor to speak there over a week's time with people from 15 countries on 4 continents. They all had the same question: can state, city, and business action in the United States surmount the federal administration's abandonment of the global climate leadership? The answer in Greece and tonight is: yes, we can. What makes me hopeful is the climate solutions that are already under way—big actions resulting in deep emission reductions. Minnesota leadership will make you proud, and enable us to build a path forward for achieving climate solutions even faster. None of what I'm describing ever depended upon federal action in the United States, but is based on state policy and corporate action.

A banner year for Minnesota's clean energy economy was 2007: the state passed the Next Generation Energy Act, which set strong renewable energy requirements for everyone who sells electricity. The law also set science-based climate goals across the Minnesota economy, for 80 percent reductions by 2050, from 2005 levels, of climate changing-gases. We now have 10 years of record since the legislature passed that bipartisan policy. How are we doing? As a science-based, data-driven policy organization, Fresh Energy focuses on results, examining the record of tons reduced and jobs created, to see if policies we helped craft made a difference, or need to be improved. I'm a climatologist by training, and know that with regard to climate change, the only thing that matters to our atmosphere is how many tons of greenhouse gases we emit each year. In Minnesota's power system, those

emissions have decreased 29 percent in the last 10 years. And the economy, measured as the Gross State Product, grew 30 percent in that same time period. So, we've shown, once again, that there's no conflict between economic growth and the environment. Smart, thoughtful policies like those in Minnesota deliver both big climate benefits and a healthy economy. Minnesota today has over 59,000 clean energy jobs that pay, on average 42 percent higher than the state average wage. These are family-supporting jobs in every county in Minnesota. 40 percent of these clean energy jobs are in greater Minnesota.

Leadership is coming from the state's largest power company, Xcel Energy. CEO Ben Fowke oversees the 4th largest American utility, with customers in 8 states from the Canadian border to Mexico. He owns the largest source of global warming pollution in Minnesota, a large coal-burning power plant. Yet Fowke was invited, with me, to the White House by then-President Obama, who wanted to talk with leaders who are making a difference on climate in Minnesota and other "states that matter." Fresh Energy's advocates built a technical record demonstrating that Xcel could replace coal with renewable energy while saving customers millions of dollars. Xcel subsequently won state approval for a business plan that includes replacing most of that big coal plant with a suite of clean energy including large amounts of solar, wind, and energy efficiency. Xcel thus will cut carbon 60 percent by 2022, an achievement roughly twice the goals of the Paris Agreement. The CEO a year ago announced Xcel's new vision: 85 percent carbon-free electricity, including 60 percent renewables, by 2030, without increasing the cost to customers beyond the rate of inflation. Xcel's vision is more than three times the Paris Agreement.

The market has helped make these transformations affordable. Since 2009, the cost of solar electricity has fallen 77 percent, and the price of batteries to help us store power--for when the wind isn't blowing and the sun has set--battery costs have come down 79 percent. Wind energy is today the lowest-cost power in Minnesota. That means that for our electricity, we have cost-effective substitutes for fossil fuels. Twenty-five percent of our power today comes from renewable energy, and we've been able to rapidly reduce our use of coal—from two-thirds coal to less than 39 percent today. This greening of our power grid, heading to 100 percent renewables, means we can rely on electricity more, without adding to climate change. But in the other parts of our economy, where substitutes for fossil fuel are far from ready, we need to switch away from oil to power transportation and away from gas to heat our homes, and replace those fuels with clean electricity.

We should start with transportation, second only to coal as a cause of global warming in Minnesota. Thousands of thought leaders, including some people in this congregation, are moving now to electric vehicles (EVs) to replace their internal combustion engines. You can arrange with your power company to charge your electric car's batteries with renewable energy. That is a way to take your car's emissions down to zero, today. By 2030, the U.S. Department of Energy estimates that MN will have 1 million electric vehicles. Your next vehicle purchase may well be a plug-in EV.

For those of us with an equity lens on policy decisions, we should look beyond our driveways at transportation. In poorer neighborhoods in the Twin Cities, many residents don't own cars, but they rely heavily on diesel buses that pollute heavily. Our state air

agency cautions that children in those communities suffer from asthma at rates much higher than average. We should begin our fuel switching in Minnesota with a focus on replacing diesel buses on routes through poor communities with electric buses. We should follow the lead of other cities who have declared that they will buy no more diesel buses, only electric buses. So, we can begin a necessary fleet transition to one that doesn't pollute our air.

Next, we need to look at new options for heating our water, and heating and cooling all buildings with clean electricity.

I've described some good news for our climate: The rapid, deep cost declines for renewable energy and batteries; rapid decarbonization because of sound energy policy, and fuel switching from fossil fuels (oil and fracked gas) to clean electricity. Climate policy at the state level has many business allies. Consider the size and scale of actions by these local firms: General Mills, Mortenson, Best Buy, Target, all of which are driving deep carbon reductions. Many Fortune 500 companies headquartered in Minnesota now seek 100 percent renewable electricity from their power company, essentially tomorrow. They know that their success will help make renewable energy commonplace. The State of Minnesota, the cities of Minneapolis and St. Paul, as well as Eden Prairie and Duluth, all are committed to meeting or exceeding the Paris climate goals. This December, 195 nations who are party to the 1992 UN treaty on climate change—and that includes the U.S.—will meet in Poland, in a coal-mining region, to hammer out the “rule book” for the Paris Agreement. I'll be there representing Minnesota, and showcasing heartland climate action that other states and nations should match, or exceed.

We have to amplify the energy transition I've described, and time is not our ally. Our generation is called upon to address climate change, an urgent challenge. But take a look around you: We are the healthiest, wealthiest, best educated, and best-connected generation in all of human history. We can accomplish great things, including fighting global warming. We need to be able to tell future generations, including the kids growing up today, in Minnesota we did everything we could to fight global warming, and it worked.

Thank you very much!