

Testimony of Jason Cervenec • Resident of Columbus, Ohio
Interested Party

Chair Balderson, Vice Chair Jones, Ranking Member Gentile, and Members of the Committee:

Thank you for this opportunity. I am a lifelong resident of the state, having grown up in northwestern Ohio in the town of Rossford. I moved to Columbus to attend university at Ohio State where I earned my Bachelors and Masters. I currently work at the university at a polar and climate research center. While the information that I share today might be new to the committee, it is regular lunchroom conversation in our facility. Climate change is no longer a distant threat. The impacts are already being felt within our state, and there is an increasingly clear consensus on future impacts. I have monitored testimony on current energy efficiency and renewable energy legislation in the Ohio General Assembly and noticed that there has been little mention of the widespread scientific consensus on climate change that, in part, led to the introduction of the standards that are currently frozen.

Likewise, I am a member of Christ the King Catholic Church in Columbus, and Pope Francis has written emphatically on the threats of both climate change and environmental degradation. Similarly, there is an aspect of social justice that is important to consider as climate change impacts the most vulnerable populations, whether in Ohio or around the globe. I am here today to ensure that I can look my daughter, currently 2 years of age, in the eye when she is an adult and say that the scientific and faith communities provided policy makers in Ohio with our best understanding of the current state of the climate system and greatest compassion for the plights of others.

Accompanying this testimony, you will find a summary of climate change impacts already being experienced in Central Ohio and changes anticipated by mid-century. This document was created as part of a climate risk and vulnerability report created for the City of Columbus in partnership with The Ohio State University and Great Lakes Integrated Sciences and Assessments Center in winter 2016.

From 1951 to 2012, Central Ohio experienced a 2.3-degree Fahrenheit temperature increase and has the distinction of being the fastest growing urban heat island (the difference between temperatures downtown and those in outlying areas) of 60 major U.S. cities studied. Under current greenhouse gas emissions scenarios, temperatures are anticipated to increase by 3 to 5 degrees Fahrenheit by mid-century.

Anticipated temperature impacts include an additional 3 to 7 weeks of temperatures exceeding 90 degrees Fahrenheit and an additional 1 to 2 weeks of temperatures exceeding 95 degrees Fahrenheit by mid-century. Such high temperatures limit the ability of individuals to work outside for prolonged periods of time, tax infrastructure and industrial cooling processes, and reduce air quality to the detriment of individuals with asthma and respiratory conditions. With nighttime temperatures remaining high, it will be difficult for those without air conditioning to

cool their houses, disproportionately affecting the poor and vulnerable. It is important to note that heat is still the greatest source of weather-related fatalities.

While Central Ohio will benefit from a longer growing season, by mid-century high temperatures will stress plants and increase risk of new pests. False springs (early springs ended by a cold snap) are expected to be more common, damaging some fruit crops. Wildlife and plants will need to migrate or adapt to these changing temperatures or risk extirpation in the state.

Precipitation in Central Ohio has also changed. While total precipitation has increased by 20% from 1951 to 2012, fall precipitation has increased dramatically (44%). More concerning is the 78% increase in the number of days per year with heavy precipitation events (events greater than 1.25 inches of precipitation) that are typically associated with nuisances such as flooding and basement backups. These intense rainfall events result in flash flows, more runoff, and greater chances of contaminated water supplies.

Increased summer temperatures and runoff from intense rainfall events create ideal conditions for algal blooms that degrade Ohio watersheds including Lake Erie, the Ohio River, and other inland lakes. Likewise, increased temperatures result in a change in the water cycle causing prolonged dry periods punctured by the torrential downpours. Such conditions are especially difficult for water resource managers and the agricultural community. Likewise, with most infrastructure having a life expectancy of approximately 50 years, it is important to consider that many structures built today should be designed to operate within and withstand conditions anticipated in 2066.

As you see, Ohio is already experiencing climate change. Therefore, aggressively reducing our emissions of greenhouse gases today, through both energy efficiency and renewable energy, will allow us to avoid some of the consequences identified in my testimony. Unfortunately, the window to take such actions is narrowing. Greenhouse gases continue to warm for 30 years following their emission, have a long residence time in the atmosphere, and are not easily removed with current technologies. Without significant actions now to reduce greenhouse gas emissions, Ohio will need to devote greater resources to climate resiliency planning or accept that the most vulnerable will suffer. Most disconcerting is the millions of young Ohioans and those yet to be born who will live with the consequences of the actions taken today without having a voice in the decision making.

Once again, thank you for your time and consideration.