Public comment by Samuel Stolper, University of Michigan Regents Meeting, May 21st, 2020

My name is Sam; I'm an economist and assistant professor at U of M's School for Environment and Sustainability. I'm speaking to you today to urge you to prioritize carbon neutrality on an ambitious timeline, and to suggest a general way to do so at low cost. Along with my colleague, Professor Michael Moore, I have been working for the past year to estimate the costs of various ways that the University could reduce greenhouse gas emissions.

Carbon neutrality means *net*-zero emissions, as opposed to the zero gross emissions of purely local decarbonization. We know from climate science that the climate-related effects of emissions reduction do not depend on the location or source of the reduction. Thus, limits on the technical or financial feasibility of campus decarbonization do not constrain the University's ability to mitigate climate change, nor do they justify inaction. In fact, we can pursue non-local emissions reduction and campus decarbonization simultaneously, so that one does not crowd out the other.

The carbon neutrality goal allows the University to pursue emissions-reduction projects wherever they are most attractive – whether on the grounds of cost effectiveness, environmental justice, or other relevant criteria. In our analysis, we focus specifically on costs, because we believe the financial constraints faced by the University are ever-present. The coronavirus pandemic has tightened this constraint significantly, making cost-effective climate action all the more important.

Our analysis highlights three widely understood facts. One, the cost of renewable energy has fallen dramatically in recent years. Two, there are large economies of scale in renewable energy production. And three, the cost of renewables per unit emissions reduction vary widely across space, especially as a function of how much the sun is out and how much the wind is blowing. What this means is that strategically-placed, large-scale renewable power installations are a very cost-effective way to reduce emissions. UM needs to pursue this avenue of emissions reduction seriously and immediately, especially to take advantage of federal renewable subsidies that are being rapidly phased out.

Examples of this strategy among universities abound, from Stanford, to Ohio State, to American and George Washington. Our favorite example, though, is the Massachusetts Institute of Technology. MIT posted a Request for Proposals for large-scale renewables all over the country. It received 41 such proposals in response, 11 of which involved sites in New England. Ultimately it chose to pay for the construction of a 60-Megawatt solar farm in North Carolina, in exchange for the rights to both the power (which it sells to recoup upfront costs) and the renewable energy credits (which it keeps, in order to ensure that nobody else takes credit for the emissions reductions). The expected aggregate cost of this project was zero dollars.

In sum: We think the best thing U of M can do is immediately post an RFP for large-scale renewables, in Michigan and beyond. We would be happy to share our report or talk further about our analysis at any time. Thank you!