July 17, 2017

Sustainable Madison Committee c/o Jeanne Hoffman (jhoffman@cityofmadison.com)

Hello:

I cannot make it to the meeting this evening but wanted to send you my thoughts in writing about the City working with MG&E.

As of July 5, 2017, Global atmospheric CO2 was measured at 408.8 ppm.ⁱ When I was born in 1951 it was 311.8 ppm, so across the globe it has gone up 31% in my lifetime alone. But even this rate of change is accelerating. The National Oceanic and Atmospheric Administration (NOAA) full greenhouse gas index is up 40 percent since 1990 – mainly due to accelerating concentrations of CO2ⁱⁱ.



This is just one of many related indicators that clearly demonstrate ongoing dangerous changes in the Earth's climate system, including:

- The last year, 2016, was the <u>third year in a row</u> that a new global average temperature record was set, and the fifth time since 2000. Each of the first eight months of 2016 set record high temperatures for that month.
- <u>All 16 years of the 21st century</u> rank among the 17 warmest years on record.
- Last year was also the <u>second-warmest year on record for the contiguous United States</u>. Every single state was warmer than average.
- During 2016, the <u>globally-averaged sea surface temperature</u> was also the highest in the 1880–2016 record, surpassing the previous record set only the year before.
- Maximum Arctic sea ice extent for the 2016-2017 winter season <u>nearly set a record low for</u> the third straight year.

It is clear as day that rising greenhouse gas emissions continue to trap more and more of the sun's radiation as heat in the Earth system with both current harmful and disastrous long-term effects.

We're standing on and beginning to fall off a cliff. After roughly 1°C so far of global warming, most of which is driven by human activity, ice sheets in Greenland and Antarctica are already losing mass at an increasing rate. Summer sea ice is disappearing in the Arctic and coral reefs are dying. The human impacts of climate change from intensified heatwaves, droughts, sea-level rise and disease vector changes are also inexorable. If we don't act rapidly to reduce our carbon emissions, we will see extreme temperature rises over this century threatening economic well-being, livelihoods, our homes, and for many, especially first among the most economically disadvantaged, their lives.

How fast must we act? According to an April 2017 report¹ (*prepared by Carbon Tracker in London*, *the Climate Action Tracker consortium, the Potsdam Institute for Climate Impact Research in Germany and Yale University*), should green-house gas emissions continue to rise beyond 2020, or even remain level, the limited temperature goals set by the global community in Paris become almost unattainable using conservative models of our so-called "carbon budget".ⁱⁱⁱ

That is why, with climate action stalled at the US federal level with fossil fuel interests appointed to high-level positions at the Department of Energy and elsewhere^{iv}, it is up to the states and cities to keep faint hopes alive that we can act in time.

Now is not the time to be timid. Now is not the time to take a go-slow approach. Now is the time for cities like Madison to do what is necessary for its citizens and the planet and **tell MG&E that its plan for renewables to be "30% by 2030" is unacceptable**. Their goal is not based on the science of risk assessment; it is a goal of convenience. I ask each of you to help take our city government 100% goals directly to MGE, and develop a plan with them that gets our entire community close to 100% renewable electricity by 2035, or even earlier.

Cordially,

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ⁱ https://www.co2.earth/

ⁱⁱ http://www.desdemonadespair.net/2017/07/noaas-greenhouse-gas-index-up-40.html

ⁱⁱⁱ https://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201

^{iv} https://thinkprogress.org/obscure-think-tank-gains-influence-1644feb0b813