THE DANGERS OF THE "MONTGOMERY COUNTY CLIMATE ACTION PLAN."

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I wish to strongly object to the "Montgomery County Climate Action Plan" under consideration by the Montgomery County Council. I am a native Marylander, living in Rockville with my wife and two fourth-grade daughters. I have a 35-year career in public policy with a special focus on science and technology.

The Council's 2017 "Emergency Climate Mobilization" signed on to the assumptions, to which I take exception, that led to this Plan. But I assume that the minds of Council members are open to new evidence, especially if it helps avoid policies that, while perhaps well-meaning, would be disastrous to county residents.

I raise five issues concerning the Plan:

- Addressing the alleged threat of runaway global warming is not and should not be a county government priority and is an unconscionable waste of taxpayer resources. The schooling system is deficient in many ways. Many areas of the county suffer serious crime problems. COVID has devasted many businesses. There are real environmental issues to be addressed. These problems, not the alleged warming dangers, are the county government's priorities and responsibilities.

- The Plan offers no credible estimate of the global warming it proports to mitigate. That is, the Plan will have *no measurable impact* on the feared warming. It will make no measurable difference.

- The draconian measures proposed to make the county "carbon free" would impose extreme burdens and costs on citizens, taxpayers and businesses in the county, again, with *no measurable impact* on the alleged problem.

- The Plan's assertions, assumptions and predictions about alleged warming harm are arbitrary, scientifically unsound, out-of-context, and can be challenged with solid scientific evidence.

- The burden of proof that the benefits of this Plan would more than outweigh the clear harm it would inflict on county citizens is on those who propose it. They have come nowhere near meeting that burden, especially because the Plan would have *no measurable impact* on warming.

My reading of the Plan suggests that it was put together in a vacuum, without any attempt to question its assumptions. I offer in this critique factual information, with citations, putting the issues in full context. For the convenience of the reader, I have kept this critique brief, but can provide much more evidence if needed.

I trust the Council will take this critique seriously, not reject it out of hand, and based on its arguments and data, see clear reasons to reject the Plan.

For your convenience, this critique is organized as follows:

I. Defining the Issues

II. Crushing Costs of the Climate Plan

- **A. Are there benefits?**
- **B. Millions of wasted taxpayer dollars.**
- **C. Skyrocketing energy costs.**
- **D. Building more building restrictions.**
- **E. Driving us out of our cars.**
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- **C. Not-so-strong storms.**
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- **A. Solar sorrow.**
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- **D. Disposing of toxic non-renewable "renewables."**

VI. Conclusion

I. Defining the Issues

The goal of the Plan is to de-carbonize the county, premised on a 2017 Council resolution that asserted an "existential threat that climate change poses to human society and to natural ecosystems." The term "climate change" obscures the real issues, since the climate has been changing for billions of years. The real issues and assumptions are:

- Human uses of fossil fuel, releasing CO2, are causing runaway global warming, as opposed to natural processes causing moderate warming that is part of normal pattern of temperature fluctuations that have gone on for millions of years;
- Warming will seriously harm human well-being;
- This harm will far outweigh any benefits of warming—longer growing seasons, fewer deaths from cold weather;
- Government-forced de-carbonizing can significantly slow or stop the warming;
- The benefits of forced de-carbonization will outweigh the serious harm done to the economy, individuals and personal liberty by such policies.

These assumptions are spurious and, in the Plan, seem to be based on a superficial media or popular cultural perceptions, out-of-context data, or assertions driven by governmental institutional or ideological interests; indeed, the Plan makes no attempt to critically consider the veracity of its assumptions.

It is crucial to question these assumptions, especially because the county's Plan will have *no measurable impact* on the feared warming. But foremost on the minds of Montgomery County citizens concerning this Plan is the question, "What costs, burdens, or benefits—if any—will it impose on us?"

II. Crushing Costs of the Climate Plan

Citizens expect elected officials and civil servants to be good stewards of their tax dollars and good guardians of their individual liberty. So before reviewing in detail the assumptions and reasons for the proposed Plan (see later sections in this critique), review the costs, burdens and benefits involved.

A. Are there benefits?

Citizens should certainly welcome the lowest market-priced sources of energy possible, energy priced without government subsidies or special favors. Thus, if individuals can lower their energy bills with solar panels on their roofs, this would be their choice. Indeed, we should

welcome innovative energy entrepreneurs developing more such technologies, including more efficient, less toxic storage batteries for renewable energy.

Further, independent of global warming concerns and sequestering CO2, planting more trees, as suggested by the Plan, could enhance community beauty and quality of life.

Yet the supposed benefits outlined in the Plan's Table 17, pp. 151-152, are arbitrary and out-of-context judgments that fail, for example, to take any account of the real costs and downsides of the recommendations. Indeed, the Plan uses the euphemism of "investment" (p. 85) to hide the fact that it is really advocating costly government spending.

The Plan's reason for eliminated CO2 is to slow feared global warming. But this goal is called into question by a "gorilla in the room" that the Plan ignores. In 2000, America emitted 5.94 gigatons of CO2, 23 percent of the then total global total of 25.7 gigatons. Since then, thanks in large part to hydraulic fracturing producing low-cost, clean natural gas, the U.S. reduced emissions by about 14 percent, to 5.11 gigatons.[1] The increase in Chinese CO2 emissions from 2000 to 2017 (7.21 gigatons) is greater than the entire current annual U.S. CO2 emissions.

So why not lobby to lift the fracking ban in Maryland, especially since every credible study shows fracking poses no measurable environmental or human hazards?[2] It seems the Plan's banning CO2 has become an end in itself rather than a means to deal with global warming.

B. Millions of wasted taxpayer dollars.

The Plan is at least honest in its statement that "Putting many of these ideas in place will require substantial financial resources, sometimes on the order of hundreds of millions of dollars or higher." In other words, this is the minimum burden to be inflicted on the country taxpayers and businesses, all for an effort that will have *no measurable impact* on the feared warming.

The Plan also knowledges that "The sheer scale of the work that must be done means that Montgomery County will not be able to fully implement the . . . [Plan] by relying on County Government resources alone. County Government revenues are not sufficiently large to single-handedly shoulder the cost of this extent of climate action. Implementing the actions outlined in the Plan calls for commitment from both the public and private sectors, while leveraging state and federal government resources."

In other words, Montgomery County will have to beggar its neighbors, to steal from other taxpayers in order to implement its Plan. What would happen if the over 3,000 counties and jurisdictions in the county followed the same policy? The folly of the Plan in this point is clear.

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[1] "Trends in Global CO2 and Total Greenhouse Gas Emissions: 2018 Report," PBL Netherlands Environmental Assessment Agency, December 2018, p. 38, https://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2018-trends-in-global-co2-and-total-greenhouse-gas-emissons-2018-report_3125.pdf

[2] See endnotes 13-24 for detailed academic citations in Timothy Benson & Linnea Lueken, "Debunking Four Persistent Myths About Hydraulic Fracking," The Heartland Institute, October, 2018, PBFrackingMythsFinal.pdf (heartland.org).

C. Skyrocketing energy costs.

In recent years, energy costs in the U.S. have stabilized and fallen. This was thanks in great part to the energy boom, especially from natural gas production on fracking on private lands. Moving to renewables before it makes any cost-efficient sense to do so would simply drive up costs to heat and air-condition our homes, cook our food, drive our cars and the like, paid for by consumers either through higher energy rates or higher taxes.

•Even before recent problems Texas had with its inadequate power distribution system, it was estimated that taxpayer subsidies for renewables, between 2006 to 2029, would total $36 billion.[3]

•California's power rates for residents can range up to 50 percent higher than the national average and even higher for commercial users because of its reliance on renewables.[4]

•Mexico has recently pulled the plug on future costly, unreliable renewables.[5]

•In Germany, which is moving to all renewables, electricity rates had increased by 78 percent by 2013, leading to a story in *Der Spiegel*, that country's top news magazine, of "How Electricity Became a Luxury Good."[6] In wasteful subsidies, Germany spent about $11 billion to generate $1.7 billion worth of electricity.[7] In 2016, households in Germany paid about 40 cents per kilowatt-hour for electricity, compared to the American then-average of about 12.5 cents.[8]

•A 2020 study documented how "Australia's excessively high electricity prices are undermining our economic resilience and competitiveness and cutting our standards of living."[9] The move to

[3] Bill Peacock, "Renewable Energy's Success Has Come at the Expense of Texas Taxpayers," Texas Public Policy Foundation, May 1, 2019, https://www.texaspolicy.com/renewable-energys-success-has-come-at-the-expense-of-texas-taxpayers/

[4] Ronald Stein and Richard Cathcart, "California Avoids Addressing Causes of Its High Energy Costs," The Heartland Institute, May 4, 2020, https://www.heartland.org/news-opinion/news/california-avoids-addressing-causes-of-its-high-energy-costs

[5] "Mexican Standoff: RT Outfits Furious as Mexican Government Blocks All New Wind & Solar," Stop These Things, May 16, 2020, https://stopthesethings.com/2020/05/16/mexican-standoff-re-outfits-furious-as-mexican-government-blocks-all-new-wind-solar/

[6] "How Electricity Became a Luxury Good," *Spiegel Online*, September 4, 2013, http://www.spiegel.de/international/germany/high-costs-and-errors-of-german-transition-to-renewable energy-a-920288.html

[7] Robert Bryce, "Energy Policies and Electricity Prices: Cautionary Tales from the E.U.," Manhattan Institute, March 2016, p. 2, https://www.heartland.org/_template-assets/documents/publications/manhattan_europe_renewables.pdf

[8] Ibid., p. 11.

[9] Alan Moran, "The Hidden Cost of Climate Policies and Renewables," *Regulation Economics*, 19 August 2020, https://www.heartland.org/_template-assets/documents/publications/Dr-Alan-Moran-Report-Australian-climate-costs.pdf

more renewables is the culprit. That's how Australia went from having some the lowest energy prices in the world to some of the highest and having serious challenges dealing with blackouts.[10]

Reliability is another serious problem faced with renewables. When the sun is not shining and the wind not blowing, or when there are spikes in power demand, storage batteries must provide backup power. But battery technology still is not up to the task. California's Pacific Gas & Electric, for example, has attempted to utilize an innovative battery system, but struggles because it could only provide 103 seconds of backup.[11] Not a good $2 billion investment. (Grid instability, brownouts and blackouts plague California as well because of its move to renewables.)

By contrast, natural gas or coal-powered facilities are more reliable and can better handle demand spikes by adding more fuel to generators.

But the Montgomery County Plan, frankly, seems unconcerned about high costs because part of its stated goal is "to reduce the amount of electricity consumed." This is sheer arrogance, presuming to force citizens to let their lives be managed around the arbitrary government planner whims. Under the Plan, Montgomery County residents can look forward to a triple whammy: higher utility bills, higher taxes and a less-reliable energy system.

D. Building more building restrictions.

Under the Plan, to reduce "emissions from the residential and commercial building sector, the County will need to deploy a combination of energy performance standards, code requirements, and incentives to support 100% building electrification by 2035." In other words, our homes will no longer be our castles. County planners will further limit our liberty to use our own property as we see fit. Further, it will become even costlier to find new, affordable housing. Note that if builders can offer houses that are "eco-friendly" but affordable, especially energy efficient, buyers would no doubt be attracted to them without government mandates. Such innovations should be welcomed, but costly "green" regulations should not be forced on citizens.

Liberal Democrat and Starbucks chief Howard Schultz rightly pushed back on the Green New Deal proposal to make all buildings "green," saying "I don't understand . . . how you're going to create clean energy throughout the country in every building of the land."[12]

E. Driving us out of our cars.

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[10] Angela Macdonald-Smith, "Manufacturers Slugged by Power Price Hikes," *Financial Review*, March 6, 2017, https://www.afr.com/business/energy/electricity/manufacturers-slugged-by-power-price-hikes20170306-gurflw

[11] David Wojick, "California Secretly Struggles With Renewables," CFacts, January 16, 2021, https://www.cfact.org/2021/01/16/california-secretly-struggles-with-renewables/

[12] Scott McDonald, "Howard Schultz Slams Green New Deal as 'Not Realistic'," *Newsweek*, April 13, 2019, https://www.newsweek.com/howard-schultz-slams-green-new-deal-not-realistic-1329430

The Plan acknowledges that to meet its goal, it "will also be necessary to reduce private vehicle use." Again, this limit to our liberty is sheer arrogance, to presume to force us citizens to manage our lives around the arbitrary whims of government planners.

The Plan, of course, would push those who do drive to use electric vehicles. Again, if this is a consumer preference, that is fine. And if electric vehicles can compete with gas-powered ones, that is to be welcomed. But note that Tesla-maker Elon Musk acknowledges that going to all-electric vehicles would require doubling the world's electricity production.[13] With no realistic chance of renewables ever meeting even current power demands (see "Dangers of Dirty Renewables" section elsewhere in this critique), indeed, with calls by warming alarmists to cut back on power use, the move to electric vehicles with current technology is out of the question.

F. The Plan's ugly racism.

A particularly disturbing part of the Plan is its attempt to clothe it as a blow against "environmental racism." The Plan does document serious problems in minority communities. But these problems are more a commentary on decades of failed policies by county, state and federal governments. These communities are plagued with substandard schools, crime and few economic and career opportunities, especially in the wake of COVID.

The "hundreds of millions of dollars or higher" the county would waste on a climate-folly Plan would be better directed at these real problems. Indeed, real education reform should be county government's Job One, and would require more than throwing more money into a failed system.

Higher energy and housing costs resulting from the climate Plan would fall hardest on the poorest citizens. This, not imagined runaway global warming, is the greater threat to minorities.

G. Limiting citizen checks on government.

Under "Climate Governance," the Plan "includes actions to help institutionalize climate change considerations in Montgomery County Government operations and decision-making." This is another way of saying that elites and planners will shield themselves from the citizens whose liberty they are supposed to be protecting and from the obvious blowback that will occur as the burden of the Plan falls on citizens.

H. Indoctrinating dogma.

The "Public Engagement, Partnerships, and Education" part of the Plan is especially disingenuous in light of the biased, one-sided and unsound nature of the Plan itself, which is documented in detail elsewhere in this critique. This is not science. This is not an open, honest and probing discussion of the assumptions on which policies that would so alter the lives of county residents are based. It's indoctrination meant to shut down thinking.

[13] Matt Posky, "Elon Musk Says EVs Will Double World's Need for Electricity," The Truth About Cars, December 1, 2020, https://www.thetruthaboutcars.com/2020/12/elon-musk-says-evs-will-double-worlds-need-for-electricity/

When, during the comment period of the January Zoom meeting introducing the current draft of the Plan, I asked of its advocates whether those assumptions would be under consideration, I was answered "No!" At least this was an admission that the minds of planners are closed.

I am still hopeful that the minds of Council members are open and that citizens will understand that for their own sakes, they need to vigorously question the Plan that could so alter their future. Given that the Plan would have *no measurable impact* on the feared warming, there should be no question in the minds of Council members of its folly.

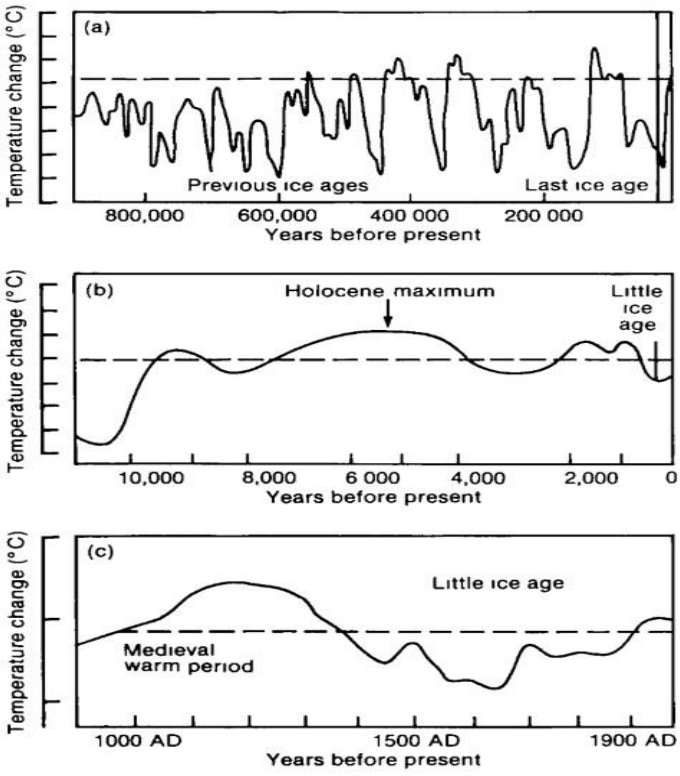
III. CO2 and Global Warming

Many citizens no doubt still wonder about the assumptions that gave rise to the Plan in the first place. Assumptions about CO2 and global warming are easily called into question.

A. Temperatures always changing.

To begin with, global temperatures have risen and fallen for centuries and millennia without any human agency involved. (See, for example, Figure 1, from the 1990 U.N. report.)[14]

Figure 1



[14] "First Assessment Report," U.N. Intergovernmental Panel on Climate Change, 1990, p. 202, https://www.ipcc.ch/site/assets/uploads/2018/03/ipcc_far_wg_I_full_report.pdf

Greenland ice cores, using a temperature proxy, confirm temperature fluctuations over the past 10,000 years when no human agency was involved. (See Figure 2.)

Figure 2

(Note: Current time is on the left and past centuries on the right.)

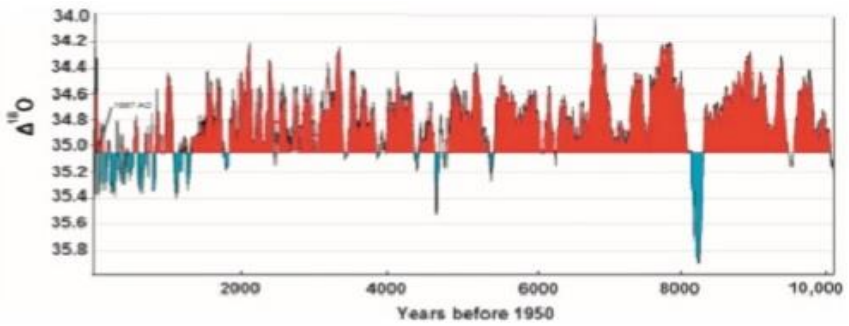
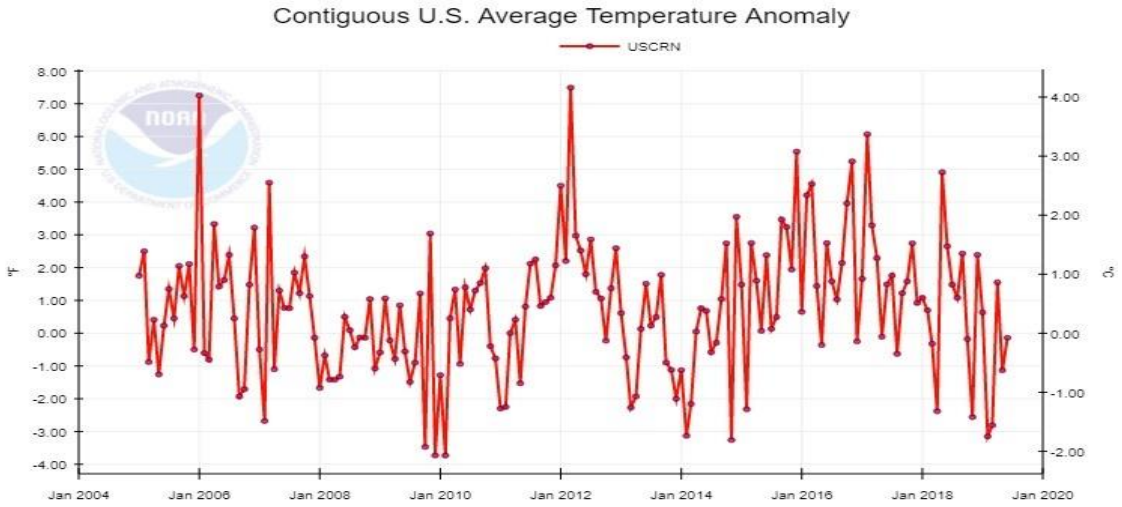


FIGURE 21.4 Greenland GISP2 oxygen isotope curve for the past 10,000 years. The vertical axis is $\delta^{18}O$, which is a temperature proxy. The red areas represent temperatures several degrees warmer than present. Blue areas are cooler times. Note the abrupt, short-term, cooling 8200 years ago and cooling from about 1500 to present. *Plotted from data by Grootes, P.M., Stuiver, M., 1997. Oxygen 18/16 variability in Greenland snow and ice with 10^3 to 10^5-year time resolution. Journal of Geophysical Research 102, 26455–26470.*

B. No dramatic warming.

The National Oceanic and Atmospheric Administration's "Climate Reference Network," a network of more than 100 pristine weather stations throughout the lower 48 states, went into operation in 2005 to obtain accurate climate data not subject to distortions caused by older stations that might be measuring local heat sinks--for example, those placed near airport runways. Since 2005, the CRN has found no net warming. (See Figure 3.) This is likely a pause, since climate has been warming for centuries since the end of the "Little Ice Age."[15]

Figure 3

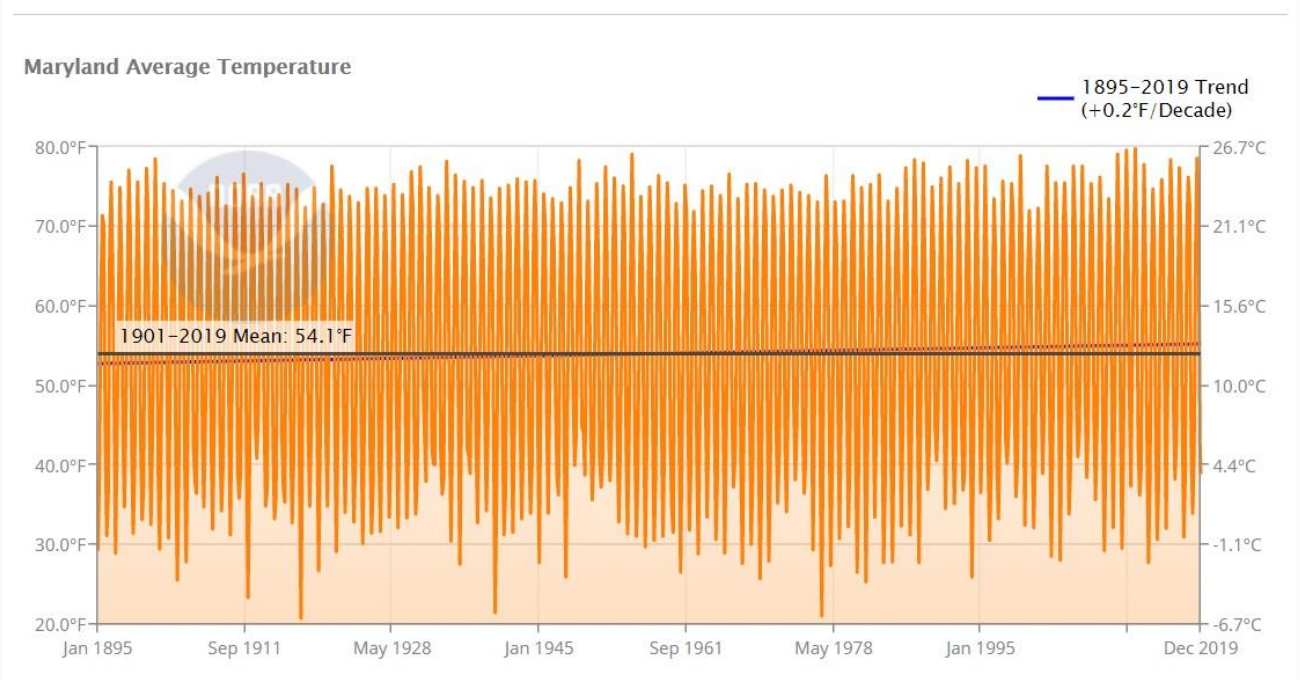


[15] Data provided by U.S. Climate Reference Network, National Oceanic and Atmospheric Administration, accessed August 2019, https://www.ncdc.noaa.gov/crn

This NOAA network is particularly important because, as a January 2021 study argued, between 25 percent to 45 percent of what warming there is results from *urban heat sinks rather than from CO2*. This study certainly *calls into question* the Montgomery County Climate Action Plan targeting CO2.[16]

Temperature trends in Maryland since 1895 show only very slight, steady warming--hardly the "Climate Emergency" that so panics the Montgomery County Council.[17] (See Figure 4.)

Figure 4



C. Inaccurate predictive models.

Climate predictions and models of the kind on which on which the county's Plan is based are notoriously inaccurate. For example, in 1990, the U.N. Intergovernmental Panel on Climate Change (IPCC) "First Assessment Report" predicted global temperatures would rise by 0.3 degrees C per decade or **3 C per century** (p. xxii).[18] But in 2014, the IPCC's "Fifth Report"

[16] Nicola Scafetta, "Detection of Non-Climatic Biases in Land Surface Temperature Records by Comparing Climatic Data and Their Model Simulations," *Climate Dynamics*, January 17, 2021, https://link.springer.com/article/10.1007/s00382-021-05626-x

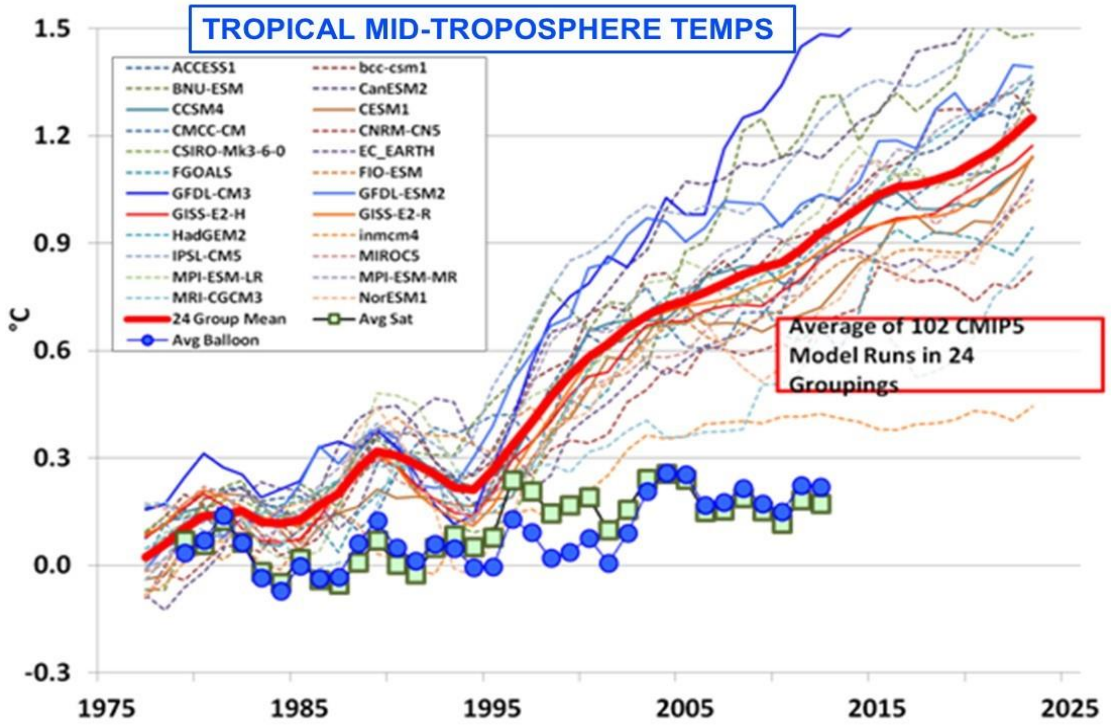
[17] Climate at a Glance, Maryland, National Center for Environmental Information, U.S. National Oceanic and Atmospheric Administration, accessed February 2021, Climate at a Glance | National Centers for Environmental Information (NCEI) (noaa.gov)

[18] "First Assessment Report," U.N. Intergovernmental Panel on Climate Change, 1990, p. xxii, https://www.ipcc.ch/site/assets/uploads/2018/03/ipcc_far_wg_I_full_report.pdf

lowered its prediction to just 0.2 degrees C per decade or **2 C per century** (p. 4).[19] However, Dr. Roy Spencer, former Senior Scientist for Climate Studies at NASA's Marshall Space Flight Center, currently Principal Research Scientist at the University of Alabama, Huntsville, has tracked empirical temperature data covering the three decades since 1990. Those data show the average global temperature rise has been only about 0.13 degrees C per decade or **1.3 C per century**, not far off from the average rise in the past century or so, and less than half the pace IPCC predicted in 1990.[20]

Dr. John Christy, also of the University of Alabama, ran predictions of global average mid-tropospheric temperature variations (5-year averages) for 32 models (lines) representing 102 individual simulations.[21] The warming curves generated by those models were two to three times higher than actual balloon- and satellite-measured curves. (See Figure 5.)

Figure 5



[19] "Fifth Assessment Report," U.N. Intergovernmental Panel on Climate Change, 2014, p. 4, https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf

[20] Roy Spencer, "Global Warming," drroyspencer.com, January 2, 2019, http://www.drroyspencer.com/2019/01/uah-global-temperature-update-for-december-2018-0-25-deg-c/

[21] Testimony of John R. Christy University of Alabama in Huntsville, U.S. Senate Committee on Commerce, Science, & Transportation Subcommittee on Space, Science and Competitiveness, December 8. 2015, https://curryja.files.wordpress.com/2015/12/christyjr.pdf

Those interested in a detailed analysis of why prediction models, in particular some used by the U.N., so often fail might consult the work of Howard Doiron and his team. Doiron is a pioneer in computer modeling. His work allowed NASA to understand and compensate for "pogo" vibrations that could have torn apart Saturn V rockets in the maximum stress phase of launches, modeling crucial to getting humans to the Moon. Doiron has applied his analytic skills to offering alternatives to flawed climate models.[22]

D. No consensus.

The county resolution establishing the task force asserts, "There is a strong consensus among scientists that greenhouse gas emissions must be eliminated in a decade at most." This is simply not true. To begin with, "consensus" does not establish truth. The studies presented above show significant dissent from an alleged orthodoxy. I could list hundreds of well-accredited scientists and researchers who do not concur with the alleged consensus. But I will simply mention a few:

•The late Weather Channel founder John Coleman rejected assertions of the dangers of made-made global warming;

•Greenpeace co-founder Patrick Moore argues that climate alarmism is more driven by ideology than environmental concerns. distracting from the need to address real environmental problems;

•Long-time environmental activist Michael Shellenberger published a 2020 bestseller *Apocalypse Never: Why Environmental Alarmism Hurts Us All*, which also took to task those who blithely promote a climate ideology based on misconceptions, ignoring a wealth of data that counter their faith.[23]

County Council members must ensure they are not in the ranks exposed by Shellenburger, especially because the county's Plan will have *no measurable impact* on the feared warming.

IV. False Fears of Global Warming Dangers

In its discussion of reducing "climate risk," the Plan "identifies the County's four largest and growing climate hazards: extreme heat, extreme precipitation, high winds, and drought." These assertions are without solid scientific foundations.

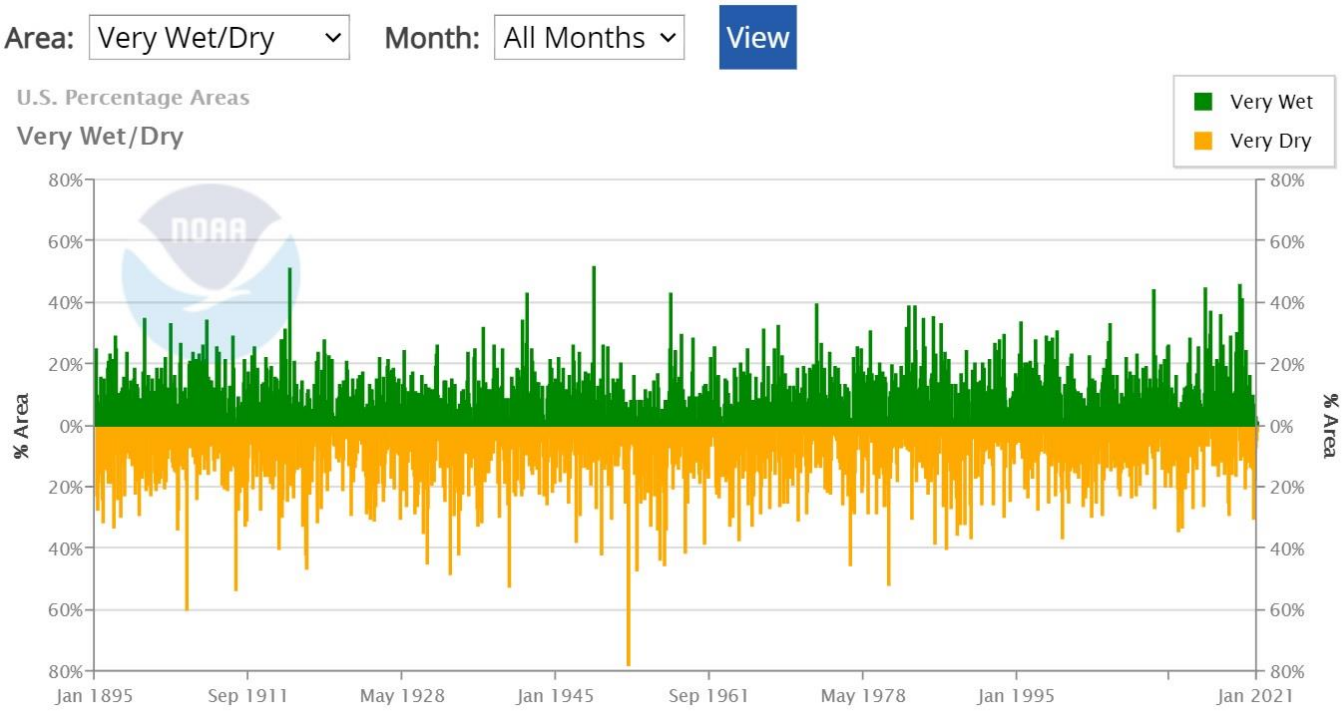
A. No unusual draught or wet trend.

[22] Harold H. Doiron, "Recommendations to the Trump Transition Team Investigating Actions to Take at the Environmental Protection Agency (EPA)," November 30, 2016, 1ca304a328496c0c011ac02790fc56ed (wsimg.com)

[23] Michael Shellenberger, *Apocalypse Never: Why Environmental Alarmism Hurts Us All*, Harpers, 2020, Apocalypse Never: Why Environmental Alarmism Hurts Us All: Shellenberger, Michael: 9780063001695: Amazon.com: Books.

One might ask, “Which is it? Extreme precipitation or drought? Too much rain or no rain?” Here, data from NOAA can clarify the issue, showing no real dramatic changes in wet vs. dry areas of the country for the past 125 years.[24] (See Figure 6.)

Figure 6



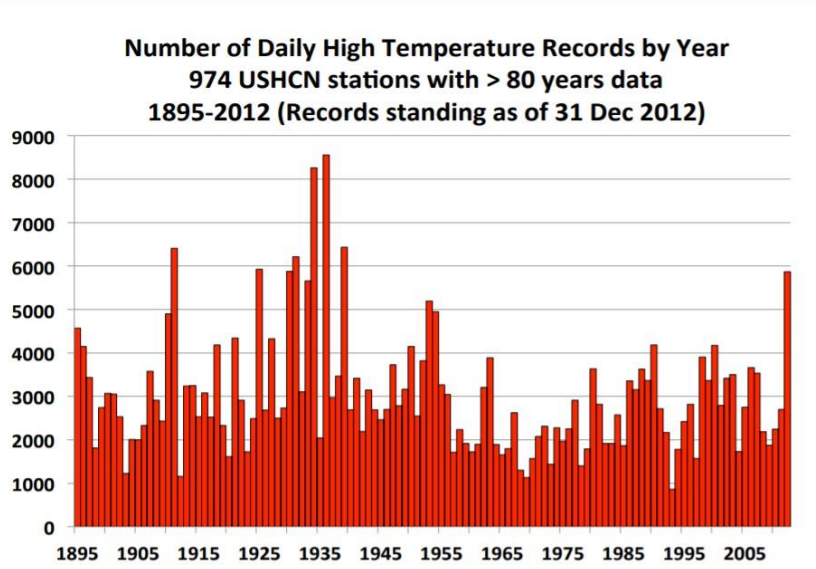
B. The record temperature fallacy.

One might ask, are daily high temperature extremes worse in recent decades than in the past? Christy offers that “If one does the analysis with stations of at least 80 years of data, and determines the number of daily temperature records by year that stand as of 31 Dec 2012, the answer to the question is ‘no’.”[25] As noted above, the NOAA CRN data show since 2005 that the climate at least in the lower 48 states has seen normal fluctuations. In the U.S., the 1930s was the hottest decade. (See Figure 7.)

[24] “U.S. Percentage Areas (Very Warm/Cold, Very Wet/Dry),” National Center for Environmental Information, U.S. National Oceanic and Atmospheric Administration, accessed February 2021, https://www.ncdc.noaa.gov/temp-and-precip/uspa/wet-dry/0

[25] Testimony of John R. Christy, “A Factual Look at the Relationship Between Climate and Weather,” Subcommittee on Environment Committee on Science, Space and Technology 11 December 2013, pp. 2-3, https://docs.house.gov/meetings/SY/SY18/20131211/101589/HHRG-113-SY18-Wstate-ChristyJ-20131211.pdf .

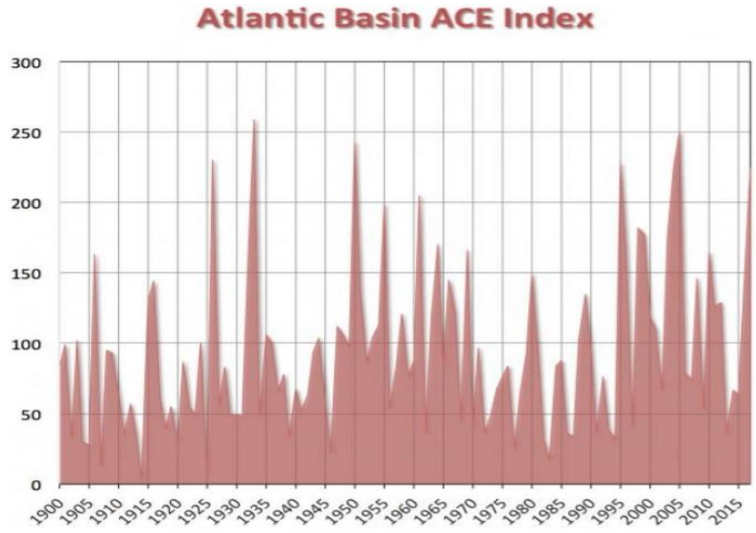
Figure 7



C. Not-so-strong storms.

Some argue that hurricanes are worse because of global warming. The Accumulated Cyclone Energy (ACE) Index takes account of the number, duration and strength of all tropical storms in a season. This Index shows wide variations but no consistent jump in hurricane factors in the Northern Hemisphere for well over a century.[26] (See Figure 8.)

Figure 8



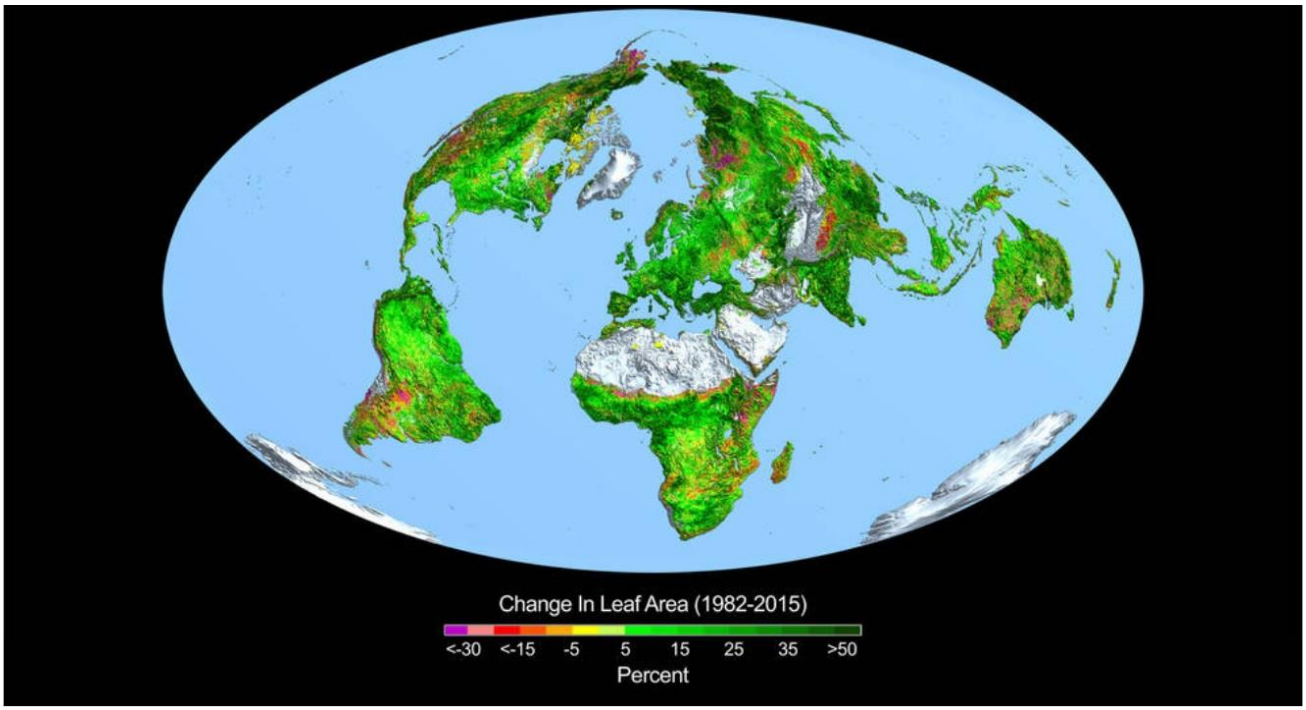
[26] Joseph D'Aleo, "What Made This Hurricane Season So Active in the Atlantic?" The Patriot Post, October 9, 2017, https://patriotpost.us/opinion/51739-what-made-this-hurricane-season-so-active-in-theatlantic, from data provided by the Earth System Research Laboratory, U.S. National Oceanic and Atmospheric Administration.

D. No agricultural collapse.

Out-of-context news reports, without reference to real-world data, often stoke fears of agricultural failures. Indeed, one the most famous and—undeservedly—respected doomsayers, Paul Ehrlich, asserted in 1970 that "The battle to feed humanity is over. In the 1970s, the world will undergo famines. Hundreds of millions of people are going to starve to death in spite of any crash programs embarked upon now."[27] This clearly did not happen!

But a 2016 headline—"Carbon Dioxide Fertilization Greening Earth, Study Finds"—on a NASA website tells the true story, highlighting the change in vegetation.[28] (See Figure 9.)

Figure 9



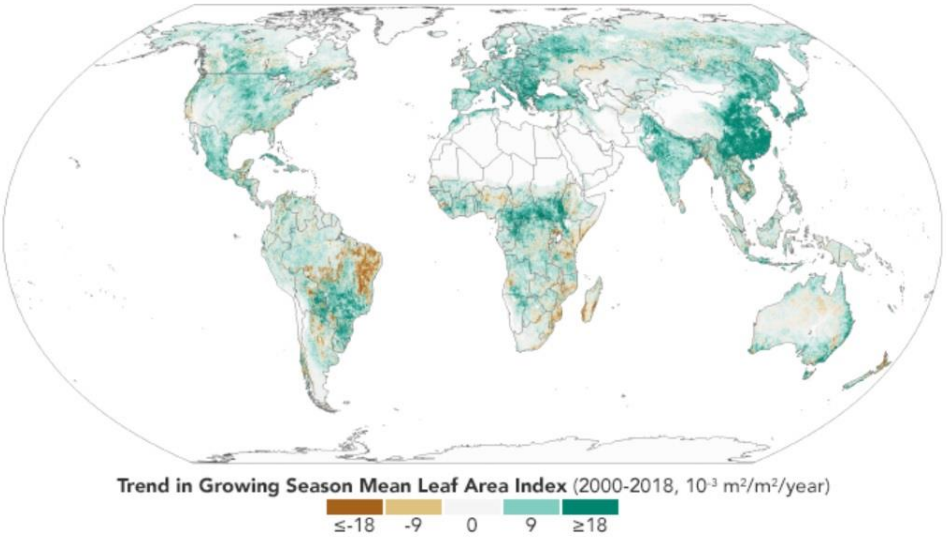
This image shows the change in leaf area across the globe from 1982-2015.
Credits: Boston University/R. Myneni

A more recent headline, this from the NASA Earth Observatory, declared that for the 2000 to 2018 period, "Global Green Up Slows Warming," highlighting leaf area growth.[29] (See Figure 10.)

[27] Paul Ehrlich, *The Population Bomb: (Revised)* (Rivercity, MA: Rivercity Press), 1968, republished 1975, p. xi, https://biotech.law.lsu.edu/blog/Ehrlich-Population-Bomb-Ch1.pdf https://biotech.law.lsu.edu/blog/Ehrlich-Population-Bomb-Ch1.pdf

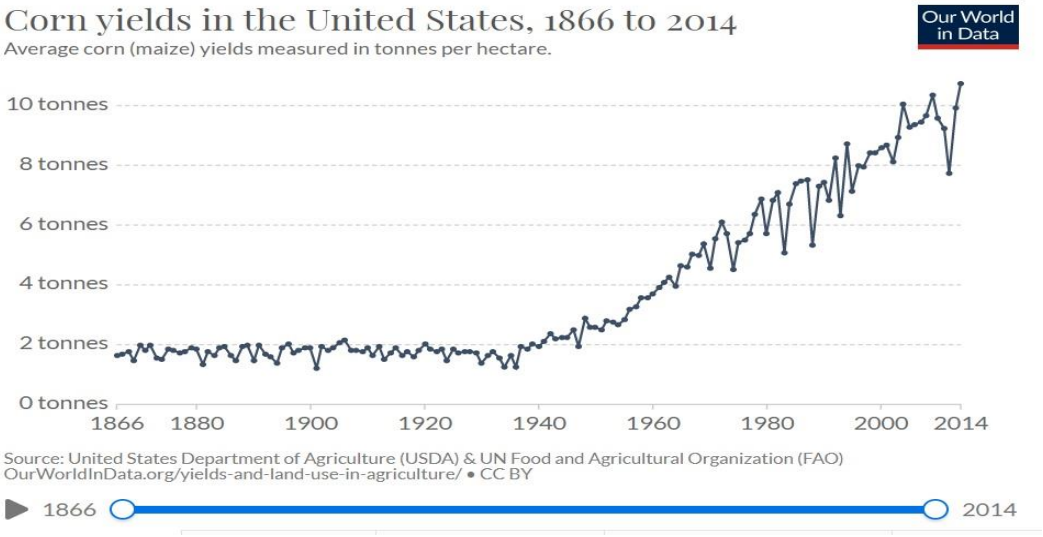
[28] "Carbon Dioxide Fertilization Greening Earth, Study Finds," April 26, 2016, NASA, https://www.nasa.gov/feature/goddard/2016/carbon-dioxide-fertilization-greening-earth

Figure 10



Just to review one crop, corn, we see the United States is in no trouble of starving because global warming is destroying our agricultural sector.[30] (See Figure 11.)

Figure 11



[29] "Global Green Up Slows Warming, NASA Earth Observatory, https://earthobservatory.nasa.gov/images/146296/global-green-up-slows-warming

[30] "Corn Yields in the United States, 1866-2014," Our World In Data, https://ourworldindata.org/crop-yields

The examples above clearly fly in the face of the Montgomery County Council's political declaration of a "Climate emergency," and show the pointlessness of a Plan that will have *no measurable impact* on the feared warming.

V. Dangers of Dirty Renewables

A major goal of the Plan is to replace fossil-fuel-based electricity generation, including from clean natural gas, with power generated from so-called "renewables," principally solar and wind. But with current technology, on a large scale, these sources are both problematic and polluting.

A. Solar sorrows.

For example, if all fossil fuel and nuclear sources of energy were eliminated in the U.S., as proposed in the Green New Deal, the county would need to generate 8.2 billion Megawatt hours (MWhrs) equivalent power for industrial, commercial, residential and transportation uses.[31]

Consider what it would take to generate this energy from solar. The photovoltaic solar power facility at sunny Nevada's Nellis Air Force Base consists of 72,000 panels on 140 acres. It generates 32,000 megawatt-hours of electricity annually.[32] So to replace all of the country's energy from similar facilities would require some 18.7 billion solar panels, covering some **57,024 square miles**, a land mass the size of the states of **New York and Vermont**.

In the past, environmental advocates have opposed some such facilities because of damage to habitats and other eco-problems posed. A major expansion of these current solar technologies would be environmentally devastating.

B. Hot air about wind turbines.

To replace the 8.2 billion MWhrs of power with a wind turbine farm array similar to the Fowler Ridge facility in northwest Indiana, which generates 1.3 million MWhrs annually and takes up

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[31] In 2018, fossil fuels and nuclear generated about 85 percent of 4.2 billion MWhrs of electricity used in the United States, about **3.46 billion MWhrs**. But 65 percent of natural gas production serves industrial, commercial and residential needs, including about 62 million homes, rather than electricity generation. See "Natural Gas Explained: Use of Natural Gas," Independent Statistics and Analysis, U.S. Energy Information Agency, accessed December 18, 2019, https://www.eia.gov/energyexplained/natural-gas/useof-natural-gas.php. That is another additional **2.73 billion MWhrs** of energy that would need to be replaced. Further, there are 272 million vehicles powered by gasoline that would have to be replaced. A Tesla-like electric vehicle uses an annual average of 4 MWhrs when charging. See "How Much Power Does an Electric Car Use?," Sibelga, accessed December 18, 2019, https://www.energuide.be/en/questions-answers/how-much-power-does-an-electric-car-use/212. This means 272 million vehicles times 4 MHrs or 1.088 MWhrs of energy that would need to be replaced. But light trucks and heavy vehicles likely would push this needed energy up to about **2 billion MWhrs**. Thus, the total MWhrs needed per year is 3.46 billion MWhrs + 2.728 billion MWhrs + 2 billion MWhrs = **8.188 billion MWhrs**. With 8.188 billion MWhs backed up for one week, this would mean an extra 157,461,538 MWhs.

[32] "Nellis Air Force Base Solar Array Provides Model for Renewable Projects," U.S. Department of Energy, March 24, 2010, https://www.energy.gov/articles/nellis-air-force-base-solar-array-provides-modelrenewable-projects

78 square miles, three times the area of the District of Columbia, would require 2.12 million turbines and **500,682 square miles** of farm, wildlife habitat and scenic lands—an amount of land as large as the combined total for **Arizona, California, Nevada, Oregon and much of West Virginia**.[33]

In the past, environmental advocates have opposed some such facilities because of damage to habitats, millions of birds killed by turbine blades, and other eco-problems posed. A major expansion of these current wind technologies would be environmentally devastating.

Offshore turbines can be more efficient because the wind blows more steadily offshore and the turbines can be larger. But there is only one such facility serving the U.S., Rhode Island's Block Island Wind Farm, because for decades environmentalists have blocked other facilities, arguing they would damage marine eco-systems.

C. Killing kids in Congo.

The environmental and human costs of renewables are extremely high because of the inputs needed for solar panels, wind turbines and, especially, the batteries needed to store power when the wind isn't blowing and the sun isn't shining; some two billion batteries similar to those used in Tesla electric vehicles would be needed to store a week's worth of backup energy to meet the country's 8.2 billion MWhrs annual power need. Mining of rare earth elements in China, cobalt in Congo and lithium in South America only at current levels rather than the huge levels required for total renewable energy generation already are creating human and ecological devastation.

For example, UNICEF, Amnesty International and other groups have investigated and denounced the conditions in Congo, where more than 40,000 Congolese children, some as young as four years old, work alongside their parents, often in mine tunnels too narrow for adults.[34]

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[33] Replacing 3,460,000,000 MWhs of annual electricity generation with 1,300,000 MWhs Fowler-sized facilities = 2,662 Fowler facilities. 2,662 facilities times 330 turbines = 878,308 turbines. 2,662 times 78 square miles = 207,600 square miles. Replacing 2,728,000,000 MWhs of natural gas use other than for electricity generation divided by the 1,300,000 MWhs generated each year by Fowler-sized facilities = 2,098.46 Fowlers. 2,098.46 times 330 turbines = 692,492 turbines. 2,098 times 78 square miles = 163,680 square miles. 34 2,000,000,000 MWhs divided by 1,300,000 MWhrs = 1,538 Fowler-sized facilities. 1,538 Fowlers x 330 = 507,692 turbines. 1,538 x 78 square miles = 119,964 square miles. 35 8,188,000,000 MWhrs divided by 52 weeks = 157,461,538 MWhs for one week. 157,461,538 MWhs divided by 1,300,000 MWhs = 121 Fowler-sized facilities. That's 121 multiplied by 330 turbines = 39,971 turbines. 121 times 78 square miles = 9,438 square miles.

[34] Barbara Jones, "Child Miners Aged Four Living a Hell on Earth so You Can Drive an Electric Car: Awful Human Cost in Squalid Congo Cobalt Mine That Michael Gove Didn't Consider in His 'Clean' Energy Crusade," *Daily Mail* (U.K.), August 5, 2017, https://www.dailymail.co.uk/news/article-4764208/Childminers-aged-four-living-hell-Earth.html; Annie Kelly, "Children as Young as Seven Mining Cobalt Used in Smartphones, Says Amnesty," *The Guardian* (U.K.), January 18, 2016, https://www.theguardian.com/ global-development/2016/jan/19/children-as-young-as-seven-mining-cobalt-for-use-in-smartphones-saysamnesty; Amy Maxmen, "Poverty Plus a Poisonous Plant Blamed for Paralysis in Rural Africa," National Public Radio, February 23, 2017, https://www.npr.org/sections/thesalt/2017/02/23/515819034/povertyplus-a-poisonous-plant-blamed-for-paralysis-in-rural-africa

International organizations have documented illnesses and deaths caused in this region; similar tragedies are seen in mining in China and South America.

D. Disposing of toxic non-renewable "renewables."

Currently, only about 1.7 percent of America's electricity is generated by solar facilities and about 7 percent from wind.[35] But these technologies do break down and, along with storage batteries, have to be disposed of.

All of these contain toxic substances—the ones inflicting human and eco-disasters from mining operations overseas. Solar panels contain lead, cadmium telluride, copper indium selenide, cadmium gallium (di)selenide, copper indium gallium (di)selenide, hexafluoroethane and polyvinyl fluoride.[36] In addition to toxic materials, wind turbines possess sheer balk. A 2.3-MW MidAmerican Energy turbine stands at 554 feet tall and requires nearly 400 cubic yards (835 tons) of concrete reinforced by about 32 tons of steel rebar.[37]

Producing these technologies involves pollution to begin with. And current disposal already is causing serious environmental problems. Environmental groups in the U.S. point to the dangers of soil and groundwater pollution from landfilled solar panels.[38] Burning wind turbine blades is energy intensive and releases toxic materials. Landfilling those blades is problematic as well. An Iowa energy company found that out the hard way.[39] Germany, which is retiring thousands of its wind turbines, also faces the problem of where to dispose of them.[40]

A Bloomberg Green headline accurately declared "Wind Turbine Blades Can't Be Recycled, So They're Piling Up in Landfills."[41]

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[35] "Frequently Asked Questions: What is U.S. electricity generation by energy source?," Independent Statistics and Analysis, U.S. Energy Information Administration, https://www.eia.gov/tools/faqs/faq. php?id=427&t=3

[36] David Nguyen, "Toxic Chemicals in Solar Panels," *Sciencing*, April 30, 2018, https://sciencing.com/ toxic-chemicals-solar-panels-18393.html.

[37] "The most common sizes of wind turbines," Arcadia Power, September 19, 2017, https://blog. arcadiapower.com/common-sizes-wind-turbines; "How big is a wind turbine?," National Wind Watch, https://www.wind-watch.org/publication/nwwpub-size.pdf.

[38] "Are We Headed for a Solar Waste Crisis?" Environmental Progress News, June 21, 2017, http://www. environmentalprogress.org/big-news/2017/6/21/are-weheaded-for-a-solar-waste-crisis

[39] "Iowa wind farm sending many giant blades to landfills," Associated Press in the Star Advertiser, November 16, 2019, https://www.staradvertiser.com/2019/11/16/breaking-news/iowa-wind-farm-sendingmany-giant-blades-to-landfills/?fbclid=IwAR3YBik-KeUoObyBydQyWcVa6zzLkbxFP4pbornrvvz1t0YvqmjE 4Xt9DCY

[40] Pierre Gosselin, "Germany's wind energy mess – as subsidies expire, thousands of turbines to close," Climate Change Dispatch, April 24, 2018, https://climatechangedispatch.com/germanys-wind-energymess-as-subsidies-expire-thousands-of-turbines-to-close

[41] By Chris Martin, "Wind Turbine Blades Can't Be Recycled, So They're Piling Up in Landfills: Companies are searching for ways to deal with the tens of thousands of blades that have reached the end of their lives," *Bloomberg*

The "Montgomery County Climate Action Plan" makes no allowance for these environmental hazards from renewable. Will the Council simply hope the energy is generated from solar and wind, and the resulting waste disposed of, in other jurisdictions?

Again, this real damage must be understood in light of the fact that the county's Plan will have *no measurable impact* on the feared warming.

VI. Conclusion

To sum up this critique:

•Dealing with the alleged danger of global warming is not and should not be a county priority. The government should focus limited resources on education, crime and the economy;

•The Plan offers no credible estimate of warming it will mitigate and would have *no measurable impact*;

•County citizens would be burdened with higher taxes, utility bills and housing costs, as well as with lost liberties and intrusive, arbitrary government bureaucracy;

•Fears about runaway global warming on which the Council based its "Climate Emergency" declaration are questionable, as are the feared results of that warming;

•Renewable energy production from solar and wind cannot deliver reliable energy on a large scale, at reasonable costs, and without serious damage to the environment.

In light of these facts, the Montgomery County Council's decision on the Climate Plan should be easy. But it clearly isn't. Much work by a small group has gone into producing the Plan, based on the Council's erroneous "Emergency" declaration. But the Council must resist the temptation to satisfy this group or to virtue signal and, instead, rise above political concerns and put the true interests of county citizens first.

As consolation, it can offer that those who prepared the Plan redirect their efforts to identifying real solutions to the real problems faced by county citizens that are the priorities of county government as discussed above. It would be hoped that these efforts would be more rigorous and unbiased than the Climate Plan.

I call on the Council to make the right decision in this matter.

Green, February 5, 2020, https://www.bloomberg.com/news/features/2020-02-05/wind-turbine-blades-can-t-be-recycled-so-they-re-piling-up-in-landfills

This comment on the "Montgomery County Climate Action Plan" submitted to:

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