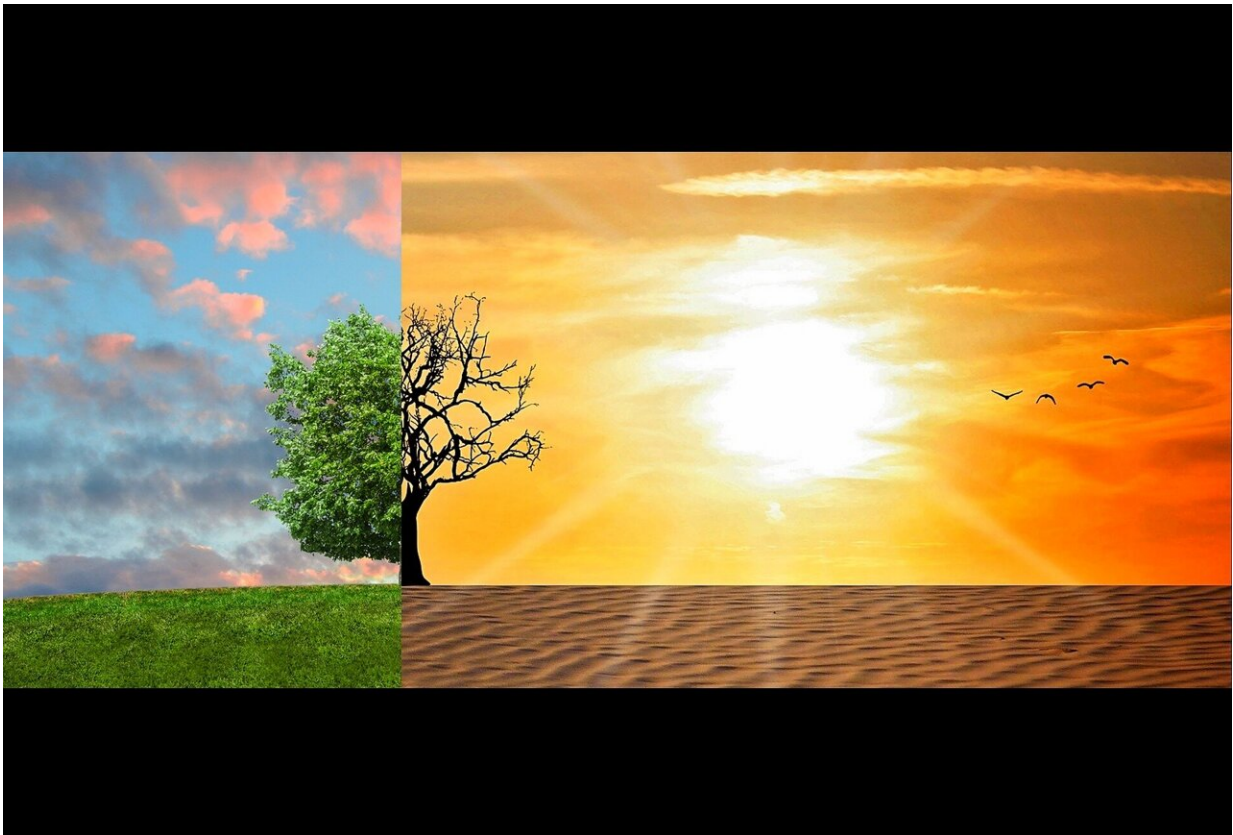


# Technology, not treaties, will reduce global warming

November 15 2021, by Steve Cohen

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As we leave COP 26 behind, we see both progress against climate change and frustration about the strength and likely effectiveness of the agreement reached. Over the past two decades, climate change has

moved from the fringe to the center of the political agenda in many nations. That is progress. Corporations, civil society, and governments are mobilizing to reduce greenhouse gasses. But the mobilization is tempered by national economic self-interest. While many decision-makers understand the severity of the problem, their own political survival requires that economic life continue uninterrupted. This means that until renewable energy is more widely available, they have no choice but allow fossil fuels.

Climate policy that requires drastic and immediate changes in the behaviors that cause greenhouse gas pollution is politically infeasible. Demands for sacrifice by [climate](#) activists have resulted in increased climate denial among those predisposed to ignore science anyway. According to a [recent poll by the Washington Post](#) and ABC News:

"A clear majority of adults say that warming is a serious problem, but the share—67 percent—is about the same as it was seven years ago, when alarms raised by climate scientists were less pronounced than they are now. The poll, released Friday, also finds that the partisan divide over the issue has widened. The proportion of Democrats who see climate change as an existential threat rose by 11 points to 95 percent over seven years. The increase was driven partly by Black Americans, who are now more likely to say the issue is very serious... Meanwhile, the share of Republicans who say climate change is a serious problem fell by 10 points, to 39 percent, over the same period. The Republican decline in Post-ABC polls tracks with the findings of annual [Gallup polls](#) in which Republican concerns dropped after 2017, when Donald Trump took office as president."

Despite the increased partisan divide on [climate policy](#), young Republicans are far more concerned about climate change than their elders. In a [Pew Research Center](#) study conducted earlier this year, Cary Funk, the director of science and society research at Pew concluded that:

"Generational differences over climate change appear in both parties, but especially among Republicans—and particularly over the role of fossil fuels. Among Republicans and Republican-leaning independents, younger adults are much less inclined than their older counterparts to support the increased use of fossil fuel energy sources. For example, Gen Z Republicans are 30 percentage points less likely than Baby Boomer and older Republicans (44% vs. 74%) to favor more hydraulic fracturing, the primary extraction technique for natural gas. There are similar generational divides among Republicans over expanding offshore oil and gas drilling, as well as coal mining."

While young people in both parties recognize the problem, we can assume that the Republican youth will be more interested in encouraging green market forces than in policies that inhibit lifestyle choices. My view is that forced lifestyle change is an arrogant and self-defeating position. There is little evidence in history that, short of authoritarian enforcement, such change is even possible. The "one child" policy in China was an example of an effort to force mass behavior change. The issue was over-population. While demographers now understand that population growth declines along with economic development, the Chinese government did not want to wait for a demographic transition. The "one child" policy reduced the rate of population growth but had many unanticipated negative impacts and was finally abandoned. In any case, a similar policy would never be possible in a democratic state.

The idea that a global treaty on greenhouse gasses can ever be anything more than aspirational is also misguided and does not recognize the persistence and power of national sovereignty. COP-26 and its predecessors played an important role in teaching the world about the importance of climate change, but the central differences between the developed and developing world, and the political need for sovereign nations to pursue economic self-interest, make a binding agreement impossible. While no one wants a planet underwater, the tragedy of the

commons operates in our atmosphere as it does with every free natural resource that we share.

But we are not doomed. Command and control global policy approaches will not work, but fortunately, economic modernization can be steered to decarbonize and detoxify the environment. The fact is that fossil fuels will be driven from the marketplace by renewable energy and batteries. The technologies that we need are not here yet, but they are on the way. Solar cells are getting cheaper and more efficient. Battery technology is rapidly advancing. The cost of recovering from extreme weather events and detoxifying land that we've poisoned is pushing national and local governments to regulate and enforce compliance with [environmental regulations](#). Corporate outlaws realize that in a world filled with smartphones and video cameras, midnight dumping of toxic waste is not as easy as it once was.

Technology is coming, but government must accelerate the pace of its development and adoption. The trillion-dollar infrastructure bill in the U.S. will help, as will the many decarbonization targets set by governments, businesses, and institutions such as the university that I work at. Government subsidies and incentives are critical. The Build Back Better program added to the infrastructure bill would make the federal government a significant force in decarbonization. So too would green federal procurement policies. In a city like New York, the greatest challenge will be rebuilding the energy system. This will require new renewable resource-based electricity generation plants, upgraded computer technologies for smart and microgrids, along with the distributed generation of electricity. Electric vehicles and charging stations are one part of the equation, but so too are windmills, solar farms, heat pumps, and home-based technologies such as solar arrays, solar water heaters and geothermal systems. The market will drive this change because the sun and wind remain free, and the technology to capture and store their energy will continue to come down in price. But

to do this quickly, government must provide incentives and invest taxpayer resources to attract private capital. And speed is essential, particularly to mitigate climate change.

In the United States, this need for government action will be difficult in the face of disinformation propaganda that presents all government programs as the first stage of a communist take-over. Fortunately, reason sometimes prevails. The bi-partisan trillion-dollar infrastructure bill provides significant funding for climate adaptation. According to Coral Davenport and Christopher Flavelle of the New York Times:

"The \$47 billion in the bill designated for climate resilience is intended to help communities prepare for the new age of extreme fires, floods, storms and droughts that scientists say are worsened by human-caused climate change. The money is the most explicit signal yet from the federal government that the economic damages of a warming planet have already arrived. Its approval by Congress with bipartisan support reflects an [implicit acknowledgment of that fact by at least some Republicans](#), even though many of the party's leaders still question or deny the established science of human-caused climate change... But still in limbo on Capitol Hill is a second, far larger spending bill that is packed with [\\$555 billion](#) intended to try to mitigate climate change, by reducing the carbon dioxide pollution that is [trapping heat](#) and driving up global temperatures."

Funding for climate resilience measures does not require ideological opponents of climate science to acknowledge the cause of damage from more frequent extreme weather events. They need only recognize the fact that the damage occurs and should be reduced when possible. In this sense, climate adaptation is an easier sell than climate mitigation. Similarly, modernizing our energy system and making it more cost-effective and efficient also does not require acknowledging the facts of [climate change](#). One simply needs to favor modernizing our aging energy

infrastructure since it is now old, falling apart and out of date. Finally, the case for [electric vehicles](#) does not require anything more than an appreciation of a more reliable vehicle that requires less maintenance than those now built with internal combustion engines.

The transition to decarbonized energy and motor vehicles will be easier than eliminating greenhouse gasses from farming, natural gas drilling and concrete manufacturing. We will also face [environmental destruction](#) from the mining of materials needed for solar cells and batteries. Each of these problems will require changes in production processes and a greater concern for [environmental sustainability](#) in all stages of economic production and consumption. Despite the ideological rigidity of right-wing politicians, there is evidence that corporations are beginning to take environmental sustainability more seriously. Part of this corporate environmentalism is due to consumer preferences, but even more is due to the attitudes of American workers. In a [Gallup poll](#) this past spring, Justin McCarthy observed that:

"About seven in 10 U.S. workers say that a company's environmental record matters to some degree in whether or not they would take a job with that company. This includes 24% who say that it is a "major factor" and a 45% plurality who say a company's environmental record is a "minor factor" in their decision. Another 30% do not consider it to be a factor at all. Making commitments or taking steps to reduce their environmental impact has become increasingly common among large U.S. and global companies in recent years. Yet, Gallup's latest findings from its annual Environment survey collected Mar. 1-15 are essentially [unchanged from the prior reading in 2017](#)."

In other words, the importance of a company's environmental record is now a stable and established part of the corporate environment in the United States. While this study does not report the environmentalism of young workers, many studies have indicated that young people tend to be

more concerned about environmental protection than their elders. In February 2019, I wrote about "the age gap in environmental politics." Moreover, a concern for environmental sustainability is a growing part of American corporate culture, as evidenced by the growing number of sustainability reports issued by American corporations. Many regulatory bodies now require these reports and in 2019, over [90% of S & P 500 Index companies published sustainability reports](#).

All of this is to argue that the drive for environmental sustainability has entered American corporate culture and is now a durable and real force for change. It is impervious to politics and even picked up momentum during the Trump presidency. While the technological change needed to combat global warming will come faster with government's intervention, it will eventually come because it is being integrated into the management culture of the organizations driving our economy. Sustainability is not a replacement for corporate profitability, but like accounting, marketing and innovative product engineering, environmental sustainability is a routine input into organizational decision making and the design of work process.

COP-26 and its predecessors contributed to the creation of this changed corporate culture. Diplomacy has influence, but only the development and implementation of new technologies will end the climate crisis. Another unenforceable climate treaty is not the real motor of change. The environmental attitudes of young people will transform our environmental aspirations into environmental reality.

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