

The Biden climate plan, Part One: A drop in the ocean

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This is the first of a two-part analysis of the Biden climate plan. This part examines its domestic impact. The second part will detail the international geopolitical implications of Biden's climate plan.

After years of record-breaking heat waves, extreme weather, rapidly melting ice caps and other stark illustrations of intensifying climate change, the Biden administration is presenting itself as a force for climate stabilization.

But the policy proposals of the Biden administration, in the face of global temperatures already increased by more than a degree Celsius, illustrate that the Democratic Party is incapable of even proposing measures that could achieve a stated goal of net zero emissions of climate-warming greenhouse gases by 2050.

Failure dooms humanity to a temperature rise of 1.5 degrees Celsius or more, a level beyond which the Intergovernmental Panel on Climate Change (IPCC) warns of major, irreversible impacts on the world's weather patterns and ecosystems.

First, a note on the science of climate change. About one-third of any carbon dioxide emitted today will remain in the atmosphere for thousands of years. As a result, cutting emissions to zero will halt a future rise in temperatures but will not reverse warming from past emissions. According to the IPCC, holding global warming to 1.5 degrees Celsius would require global emissions reductions of about 50 percent by 2030 and net zero emissions around 2050.

In the words of the IPCC itself, "The rates of system changes associated with limiting global warming to 1.5 degrees Celsius with no or limited overshoot have occurred in the past within specific sectors, technologies and spatial contexts, but there is no documented historic precedent for their scale."

Faced with this monumental challenge, the Biden climate plan, announced last July, offers modest incremental proposals, claiming that it will "Ensure the U.S. achieves a 100% clean energy economy and reaches net-zero emissions no later than 2050." There is no concrete discussion of the trajectory to 2050 (by which time Biden will be long gone), meaning that even if his stated goals were to be achieved during his time in office, it is entirely possible that the US would far exceed its remaining carbon budget in the meantime. The necessity of slashing greenhouse gas emissions has been well understood by scientists since the 1970s. Emissions continued to rise for decades and continued to do so through the Obama-Biden administration despite Obama's grandiose campaign claim that 2008 "was the moment when the rise of the oceans began to slow and our planet began to heal."

Biden's early executive actions on climate change illustrate the modest and incremental character of his climate agenda. Biden has blocked the Keystone XL pipeline, which would transport largely unprofitable and carbon intensive heavy oil from Canada to the US Gulf Coast. He has also ended the distribution of new oil and gas leases on federal lands, which will not have an effect on drilling for years because companies have stockpiled leases.

Biden proposes to fulfill his current promise through executive orders and by demanding that Congress establish a mechanism to reduce emissions, invest in research and innovation, and encourage "rapid deployment of clean energy innovations."

Before discussing the proposal in detail, it is important to emphasize that the obstacles to solving the climate crisis are not technological and scientific, but social and political. It is within humanity's capabilities to limit climate change to manageable levels while maintaining a high standard of living for all, relying largely on technologies that exist today. But to do this successfully requires drastic inroads into the foundations of world capitalism: private ownership of the means of production, production for profit, and the division of the world into rival capitalist nation-states.

The Biden climate plan, like all such plans put forward by major capitalist governments, is a fraud and a political trap. It claims that the climate crisis can be resolved within the framework of capitalism, and even presents the capitalist state and private, profit-making corporations as the engines of the transformation required to overcome global warming.

It relies on privately owned American corporations to do the vast majority of the work of reducing emissions, with modest assistance from the federal government. In the short-term, Biden proposes a series of executive branch actions to regulate corporate behavior, including stricter energy efficiency and methane emissions standards; leveraging \$500 billion per year in federal purchasing to opt for low-emission energy and vehicles while improving efficiency of government buildings and climate resilience; increasing the amount of land under conservation; barring new oil and gas permitting on public lands; and requiring public companies to disclose greenhouse gas emissions from their operations and supply chains as well as make an assessment of the risks posed to their business by climate change. In addition, the Biden administration will supposedly roll back Trump-era sabotage of environmental regulations.

In addition, Biden is calling on Congress to approve \$1.7 trillion in spending over the next 10 years, alongside a national enforcement mechanism for emissions reductions, with its first milestone no later than January 2025. Should they be executed, Biden's proposed actions would surely have a modest effect on US greenhouse gas emissions. However, the proposal is a drop in the ocean compared to what is needed.

The gross domestic product (GDP) of the US economy was \$21.5 trillion in 2019, including \$193 billion from oil and gas extraction, \$355 billion from utilities (primarily electricity and natural gas), \$147 billion for air transport, \$175 billion for truck transport, and \$44 billion for rail, as well as \$2.35 trillion for manufacturing, with \$164 billion for motor vehicle manufacturing alone, according to the United States Bureau of Economic Analysis. The aforementioned industries, totaling \$3.2 trillion in annual output combined, are responsible for much, but far from all, of US greenhouse gas emissions.

This is by no means a complete accounting of all sectors of the economy that would need to be transformed to reduce greenhouse gas emissions to

zero. All of these industries also have enormous stocks of capital, such as machinery, vehicles, and buildings, that would need to be replaced with non-emitting technologies.

All serious proposals for a net-zero emissions economy rely on electrifying most energy needs, such as heating, transportation, and industrial processes, while transitioning electric power to a system based on carbon-free energy (such as wind, solar, hydroelectric and nuclear). Thus, although electricity generation accounts for about 27 percent of US emissions, it is the key to much deeper reductions.

The Biden plan includes almost no specifics related to wind and solar energy, the most promising and scalable zero-carbon energy sources, except to note the rapid declines in the cost of both technologies while calling for doubling the currently minuscule generation of offshore wind energy in the US. The implication is that while Biden and the Democrats expect further growth in solar and wind, for which the US has almost limitless potential, this is being left up to market forces.

It is true that solar and wind are now among the lowest-cost sources of bulk electricity in many parts of the country, and that this is driving rapid deployment. In fact, work by leading institutions suggests that it would be possible to reduce emissions from the electric power sector by 80 percent or more from 1990 levels with current technology while actually lowering the cost of electricity. However, this is only possible if the deployment of wind and solar is carefully coordinated to ensure that production from these variable resources matches demand at the right times.

Market incentives alone, as opposed to rational planning, cannot sustain this level of coordination. The consequences of this anarchic approach are already visible in California, where solar and wind make up about a quarter of total electricity and customers are already being disconnected for hours or even days at a time due to evening electricity generation capacity shortfalls during heat waves (not to mention wildfires).

Transitioning to a low-cost, low-carbon energy system requires greatly increased coordination across regions, enabled by a massive expansion of the electricity transmission system. The solar power of the desert Southwest and the wind power of the Great Plains are much more useful if the electricity they produce is available to the whole country or continent. In addition, electrifying energy uses such as transportation and heating will require more electricity transmission.

However, the construction of new transmission lines in the US has slowed to a crawl in recent decades, due in part to the difficulty of permitting projects across multiple states and municipalities. This is true even in cases where a new transmission line would be highly profitable, as with a planned 700-mile, \$2.2 billion project from wind-rich Oklahoma to Arkansas and Tennessee, which was terminated after roughly a decade of political opposition. The Biden plan proposes re-powering existing transmission lines or building transmission lines along current rail or highway corridors, which seems an expedient approach, but would still require political compliance from state and local governments and would need to be planned in coordination with wind and solar deployment to achieve the greatest benefits.

Transportation, responsible for 28 percent of US emissions in 2018, is a major focus of the Biden plan. For light-duty and medium-duty transportation (e.g., passenger cars and small delivery trucks and vans), Biden proposes to expand existing \$7,500 electric vehicle tax credits and build 500,000 public charging stations. Biden would also tighten fuel economy standards through the Department of Transportation, with the aim of ensuring 100 percent of vehicle sales are electric by some unspecified future date.

Electric vehicles are improving rapidly and it is possible that they will be cost-competitive with gasoline and diesel-powered cars and light trucks in the next decade or so. However, given that the average US vehicle lasts 12 years, even with 100 percent of sales, it will take well over a decade to transition the more than 270 million motor vehicles in the US to electric.

In addition, electric vehicles may not be well suited for many applications, particularly for rural households that regularly require long trips, or residents of multifamily buildings without designated parking spaces (public charging can take hours).

Biden's plan proposes a substantial expansion of high-speed rail infrastructure, an area in which the US lags behind the rest of the industrialized world. However, if California's experience is any guide, rail expansion will take decades and suffer major cost overruns.

During his first tenure as California governor from 1975-1983, Jerry Brown signed legislation commissioning a study for a high-speed rail system between the state's major metropolitan areas. In 1993, a commission was created to further study and plan for such a system. After 15 years of legislative delays, California voters approved a \$9 billion bond to fund the system, originally estimated to cost \$65 billion in year-of-expenditure dollars, a figure which has now ballooned by over 40 percent to \$91 billion. Although the project is still nominally on track for its 2033 completion date, the Silicon Valley to Central Valley link is now 18 months behind schedule and much of the planned right-of-way still has not obtained environmental clearance.

Thus, a single high-speed rail project along the lines of California's would account for 5 percent of the entire 10-year Biden climate budget and would take at least 25 years to complete, coming online in 2045 at the earliest, five years before Biden proposes the US achieve net-zero emissions. The resources being proposed are utterly short of the proclaimed goals.

About a quarter of the proposed budget, \$400 billion over 10 years, would fund a new research and development agency, Advanced Research Projects Agency-Climate (ARPA-C) to promote the development of breakthrough technologies such as much cheaper electricity storage and next-generation nuclear reactors. Investment in emerging technologies is very necessary, but under the auspices of American imperialism such research will inevitably focus on the development of high-tech weaponry, energy beams and upgraded nuclear warheads. These will become the priority, while the social and environmental uses of new technologies will lag behind. It is unlikely the technologies developed by this program could play a substantial role in achieving the 2050 target.

The bulk of the emissions reductions in the Biden plan would come through a loosely-described legislative enforcement mechanism that would mandate that the US reach net-zero emissions by 2050. Such an enforcement mechanism would most likely be modeled after the so-called "cap and trade" programs in various states of the US Northeast and Mid-Atlantic regions, California and Europe, in which a governmental agency allocates tradeable permits for greenhouse gas emissions and reduces the number of permits in circulation over time.

Another commonly proposed option would be a carbon tax on emissions, presumably escalating over time. California, generally considered to be an environmental leader within the US, already has programs and targets similar to those proposed by Biden. Even so, California will need to cut emissions by 4.9 percent annually from 2020 to 2030 to reach its targets, but has so far never achieved a reduction beyond 2.9 percent outside of a recession. Much of the rest of the US is far behind California and would need to transition even faster.

These examples illustrate the modest ambitions and wishful thinking that underlie the proposed Biden climate plan. The list of inadequate solutions above could easily go on to include sectors such as aviation, agriculture, building efficiency, urban planning, hydrogen, carbon capture and more. If implemented, the Biden plan would unquestionably result in a reduction in greenhouse gas emissions in the US, but the plan does not represent a serious attempt to limit global warming below dangerous levels. It is an effort to appease popular demands, particularly from young people, without imposing undue burdens on corporate interests.

As timid as Biden's legislative agenda is, it is unlikely to pass Congress

in anything resembling its proposed form. Biden proposes to fund this \$1.7 trillion plan in large part by ending the Trump tax cuts, which will be fiercely defended by Wall Street and its representatives in both parties. Biden also proposes measures to reduce corporate tax evasion and remove fossil fuel subsidies. This is Biden's starting position for what will inevitably be a protracted negotiation with Republicans and Democrats alike, which will lead to further watering down of already token measures.

Biden's \$1.7 trillion climate change plan, even if it passed exactly as proposed, would provide, over 10 years, less than half the sums handed out to the banks and major corporations in a single bill, last year's CARES Act. At \$170 billion per year, the fight against a global environmental catastrophe would be less than a quarter of the \$740 billion in 2021 military spending. The Democrats and Republicans will hand out trillions to the banks and the military at the drop of a hat, but when it comes to the survival of the human species, they will do nothing that threatens the profits of American corporations.

Climate change is among the greatest threats facing humanity today. The Biden climate plan illustrates the impossibility of reducing greenhouse gas emissions, even in a single country, at the rate required to prevent dangerous levels of warming. Rising to this challenge will require rational economic planning at an international scale. The only serious fight against climate change is the struggle for socialism.

To be continued



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