With a victory in the presidential election, Joe Biden now faces a U.S. Senate that still hangs in the balance. But even with a Democratic runoff sweep in Georgia next month, it will be very divided. So what will be possible for a President Biden and his administration to achieve on climate change?

Agency action, foreign policy changes, and spending can all make a difference on emissions, with any COVID stimulus and budget deals with Congress, if feasible, providing potential avenues for further climate action. Here are some ideas along those lines, broken out by key sectors of the economy.

Action on Transportation

As the EPA chart above of 2018 emissions shows, transportation contributes the largest share of nationwide greenhouse gas emissions at 28%. The best way to reduce those emissions is to decrease per capita driving miles through boosting transit and the construction of housing near it, as well as switch to zero-emission vehicles, primarily battery electrics.

Transit-oriented housing is largely governed by local governments, who generally resist construction. Absent state intervention or federal legislation with a divided Congress, the Biden administration will have to make surgical regulatory changes directing more grant funds to infill housing and potentially use litigation and other enforcement tools to prevent and compensate for racially discriminatory home lending and racially exclusive local zoning and permitting practices.

On **transit**, a Biden administration would be very pro-rail, especially given the President-elect's daily commuting on Amtrak in his Senate days. If the Senate flips to the Democrats, **high speed rail** could be a big part of any COVID stimulus package, which would be a lifeline to the California project that is otherwise running out of money. Other urban rail transit systems could benefit as well, and the U.S. Department of Transportation could favor and streamline grants for transit over automobile infrastructure. Notably, LA Metro CEO Phil Washington, responsible for implementing the nation's most ambitious rail transit investment program in Los Angeles County, is chairing Biden's transition team on transportation.

On **zero-emission vehicles**, Biden may have relatively strong tools to improve deployment of this critical clean technology, regardless of Senate outcomes. First, perhaps through a budget agreement with Congress, he could reinstate and extend tax credits for zero-emission vehicle purchases, which have expired for major American automakers like General Motors and Tesla. Second, he could use the enormous purchasing power of the federal government to buy zero-emission vehicle fleets. And perhaps most importantly to California, his EPA can rescind its ill-conceived attempt at a fuel economy rollback for passenger vehicles and then grant the state a waiver under the Clean Air Act to institute even more stringent state-based standards, toward Governor Newsom's new goal of phasing out sales of new internal combustion engines by 2035.

Reducing Electricity Emissions

The electricity sector is a close second place, with 27% of the nation's greenhouse gas emissions. The move toward **renewable energy**, particularly solar PV and wind turbines, is so strong that even Trump had difficulty slowing it down during his single term in office, in order to favor his fossil fuel supporters. But nonetheless, the Trump administration created some strong headwinds which can now be reversed.

First and foremost, President-elect Biden can drop the tariffs on foreign solar manufacturers, which drove up prices for installation here in the United States. Second, as with the zero-emission vehicle tax credits, a budget deal with Congress could bolster the federal investment tax credit for solar, which steps down from the initial 30% toward an eventual phaseout for residential properties and 10% for commercial properties. The credit could also be extended to standalone **energy storage** technologies, like batteries and flywheels, if Biden budget negotiators play their hands well (easy for me to say). A Biden administration could also improve **energy efficiency** by dropping weak regulations on light bulbs and appliances like dishwashers at the U.S. Department of Energy and introducing more stringent ones instead.

Legislatively, any bipartisan COVID stimulus deal, if it happens, could potentially contain money for a big renewable energy buildout, including for new transmission lines, grid upgrades, and technology deployment. In terms of regulations, if Biden is able to get any appointments through the Senate to agencies like the Federal Regulatory Energy Commission (FERC), that agency could make climate progress by simply letting states deploy more renewables and clean tech, including demand response, as well as potentially supporting state-based **carbon prices** (a move supported by Trump's FERC appointee Neil Chatterjee, which promptly resulted in his demotion last week).

Slowing Fossil Fuel Production

The two big moves for the Biden administration will be to stop new leases for oil and gas production on public lands (including immediately restoring the Bear's Ears and Grand Staircase-Escalante national monuments) and bringing back the **methane regulations** on oil and gas producers that the Trump administration rolled back. As a bonus, his Interior Department could engage in smart planning to deploy more renewable energy on public lands, where appropriate, including offshore wind.

Other Climate Actions

The list goes on for how the Biden administration can embed smart climate policy into all agencies and facets of government, with or without Congress. Of particular note, his appointees at financial agencies like the Federal Reserve and U.S. Securities and Exchange Commission could bolster and require **climate risk disclosures** for institutional and private investors. The U.S. Office of Management and Budget could ramp back up, based on the best science and economics, the **social cost of carbon**, which represents the cost in today's dollars of the harm of emitting a ton of carbon dioxide equivalent gas into the atmosphere. This measure provides much of the economic justification for the federal government's climate regulations. And of course, President-elect Biden can have the U.S. rejoin the **2015 Paris climate agreement** immediately upon being sworn in (though the country will need to set a new national target).

Overall, Biden's win means the U.S. will regain some climate leadership at the highest levels, with much that can be done through congressional negotiations, agency action, and spending. However, the stalemate in the US Senate likely means that any hopes for big new climate legislation will be dashed. As a result, continued aggressive action at the state and local level, as well as among the business community, will be critical to continue to help push the technologies and practices needed into widespread, cost-effective deployment to bring down the country's greenhouse gas footprint.

One election certainly won't solve climate change, and the costs continue to rise to address the impacts we're already seeing from extreme weather. But given the current *political* climate, the actions described above could allow the U.S. to still make some meaningful progress to reduce emissions over the next four years and beyond, even in an era of divided government.