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News & Highlights

Climate Agreement—Revisited

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In these pages in December 2016 [1], it was noted that the United States and China, representing together 38% of global greenhouse gas emissions, agreed in September 2016 to join the Paris Agreement [2,3] and that, on November 4, 2016, the required ratifications were reached in order to put the agreement in force [4]. To date, 195 nations have signed. For the United States, the agreement reflected the goals of the Clean Power Plan proposed by Environmental Protection Agency (EPA) to cut emissions 26% to 28% below 2005 levels by 2025. This was expected to be achieved largely by retirement and/or relegation to cycling or intermittent duty of a large amount of coal-fired electricity capacity by 2020.

The agreement of the United States to join the Paris Agreement occurred less than a month before the national election on November 8, 2016. It was noted that the somewhat surprising outcome of that election put the fate of the US commitment to the Paris Agreement in doubt. The new administration was/is controlled by the Republican Party, which includes significant groups of voters skeptical of global warming; that decries "excessive" environmental regulation; and laments the loss of jobs because of the perceived consequential collapse of the coal industry [5]. The US coal industry has been in decline for over a decade following the appearance of plentiful natural gas as an alternative fuel for electric power generation that could be installed in smaller, less risky increments. But the precipitous industry collapse was blamed at least in part on environmental regulations (present or expected) to mitigate global warming that disadvantage coal. The decline was exacerbated by dwindling support from banks for financing new coal-fired power plants in the United States and other developed countries [6] because of perceived risks—both the market risk from competing fuel sources and the risk of more restrictive environmental regulation.

On March 28, 2017, by executive order the new administration instructed the EPA to begin rewriting the 2015 regulation that limits greenhouse gas emissions from existing power plants [7]. This will initiate a difficult rulemaking process and probably provoke a protracted legal fight that will delay adoption of new rules. And, on June 1, the administration announced it would withdraw from the Paris Agreement [8]. This move was supported by the administration as favorable for the US economy and sovereignty, but decried by other major countries in the world and remains controversial in the United States. Supporting a policy that would simultaneously oppose efforts to combat global warming and restore coal mining jobs has a lot of charm to the administration, but less reality, because coal job loss has been driven more by mining automation and, as noted earlier, the availability of cheap natural gas from fracking. Nonetheless, the administration's position on global warming is clear.

It will take about four years for withdrawal from the Paris Agreement to be completed and, it was noted by *The New York Times* [8], this will put the question in the hands of the voters in the 2020 presidential election. Thus, a new administration could be in place before withdraw is completed. This seems a rather whimsical observation, however, given that the present administration was elected even though their negative position on climate change was well documented. Moreover, while climate change and terrorism are the two highest ranked security concerns in much of the world, in the United States, a recent survey indicates, climate change falls to third behind terrorism and cyberwarfare [9], with only 56% of Americans putting climate change as the most serious threat to security, compared with 71% for cyberwarfare and 74% for terrorist attacks. And the partisan split is stark: For those who consider themselves left leaning, 86% perceive emissions as a threat, while for those on the right, the support base for the present administration, it is only 31%. A collection of factors may lead to a change of administration in 2020, but hoping for an election "revolt" based on withdraw from the Paris Agreement alone, seems a rather wishful view.

In the interim, it seems unlikely that the EPA can or will follow through on its Clean Power Plan. Indeed, as noted in the earlier piece, at that time the Plan was under litigation by 28 states and over 100 companies and it seems unlikely that the US Department of Justice in the new administration will defend those cases vigorously, if at all. So, efforts to retire coal-fired plants due to environmental regulation may slow, although the degree to which such plants will be retired anyway due to competition with natural gas is less clear.

The news is not all negative for climate action advocates, however. The United States is not a monolithic country. Governors of states and mayors of cities cannot flout federal law, obviously, but they can follow policies at odds with federal policy and many, mostly Democrats, have stated that they will do so [10]. Some economic incentives from states to encourage wind and solar power and retire coal capacity will likely still go forward. And, under federal law, California (CA) is allowed to enforce more stringent emissions standards than required by the EPA (subject to EPA approval) and states are allowed to follow the CA or EPA standards [11]. Twelve other states have chosen to follow the CA standards. Many auto manufacturers choose to make cars serving the entire nation following the standards

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for CA, which contains a massive market of 39.5 million people, about 12% of the entire US population. On March 24, 2017, the CA Air Resources Board voted to adopt more stringent emissions standards, setting up a potential conflict with the national administration [12].

The US based companies are also increasingly concerned about the future effects of global warming on their businesses and are beginning to make business decisions/investments based on mitigation of the effects of global warming. In responding to the administration's move, some prominent business leaders countered that it would ultimately harm the economy by ceding the jobs of the future in clean energy and technology to overseas competitors [8].

In the end, the way the United States addresses global warming is important to the global community both numerically and psychologically and, thus, as the new US administration downplays and/or does not pursue global warming goals and commitments put in place previously, it is disappointing to much of the world and will continue to be so for at least the next four years. It seems hard to expect that piecemeal initiatives from cities, states, and businesses could be as effective as a concerted national effort.

All that said, it needs to be acknowledged that the United States is not destroying the "attack" on global warming all by itself, because the agreement is less than perfect, at best. The goal laid out by the Intergovernmental Panel on Climate Change (IPCC) is to contain the rise in global temperature to 2 °C relative to preindustrial levels in 2100. As noted in the earlier piece, the commitments under the agreement are substantive, but no country is on the trajectory necessary to meet the 2 °C target. Allowing for the substantive commitments of the United States (as originally agreed), China, and the European Union (EU), but assuming that other countries will continue to let emissions grow, the probability of staying within 2 °C is less than 1% [13], based on a model of Chris Hope of the University of Cambridge. Absence of the United States, at least temporarily, makes the challenge more difficult, but the international community, if serious about climate change, should not congratulate itself on pursuing plans which are insufficient.

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