

National Government Denial of Climate Change and State and Local Public Health Action in a Federalist System

This supplemental issue of *AJPH* has a timely focus on climate change and health, following recent disastrous hurricane events and continued indications of global warming. We note the loss of life and widespread damage from flooding, landslides, and storms that have occurred in other parts of the world. For instance, a third of Bangladesh was under water at the peak of rains in August 2017. The public health consequences of climate change are a critical element of the rationale for action.

US actions on climate change will be slowed for the duration of the current administration, as President Trump says the US will withdraw from the Paris Climate Agreement, and the Environmental Protection Agency has delayed or abandoned its climate change–related initiatives.

GREENHOUSE GAS EMISSIONS

In 2014, the United States was the second leading emitter of greenhouse gases at about 15% of the total, following China at more than 25%.¹ However, US cumulative carbon dioxide emissions since 1850 exceed those of any other nation, and

its per capita emissions are among the highest (<http://bit.ly/2prPIBH>). Although total emissions from many high-income countries, including the United States, are now flat or declining, greenhouse emissions from rapidly industrializing countries continue to rise, heightening the urgency of reducing emissions by high-income countries.

Fortunately, the two most populated countries in the world, China and India, are moving quickly to reduce dependence on coal and to invest in renewable energy sources (<http://bit.ly/2ricbKJ>). China and India appear on track to meet Paris Agreement commitments, and China is on track to hit peak emissions within a decade.² Whether global warming can be held to 2°C, a long-held goal that is incorporated in the Paris Agreement, depends on whether China, India, and other rapidly growing economies accelerate the move to renewables and what energy track the United States takes, which still contributes substantially to greenhouse gas emissions.

The United States was moving forward to reduce greenhouse emissions 17% by 2020 through such actions as increasing the fuel efficiency of motor vehicles, restricting emissions from

electricity generation through the Clean Power Plan, placing a moratorium on leasing federal lands for coal mining, encouraging the development of renewable energy sources, and helping communities prepare for the consequences of climate change—all steps detailed in the Obama administration’s 2013 publication of *The President’s Climate Action Plan*. These measures have now been reversed, and the current administration supports the advancement of fossil fuels, including coal.

However, it is doubtful that the Trump administration can turn back the clock on the new energy economy. The US coal industry is on its knees, not because of environmental policies but because there are cheaper fuels on hand, natural gas in particular.³ Internationally, businesses are committing to low carbon investments: car makers such as Volvo, Toyota, and Mazda are moving quickly to increase electric car production.⁴ Several

governments, including those of the Netherlands and Norway, have announced the intention to no longer sell gasoline-fueled cars, and China is moving forward quickly with electric vehicles. Solar energy is ever cheaper and more feasibly implemented. The present momentum in climate change action is probably unstoppable and driven by broad global recognition of the imperative for action and a quickly changing energy marketplace that increasingly favors renewable energy sources.

ACTIONS BY STATES AND MUNICIPALITIES

Although the Trump administration is overturning past climate initiatives, states and municipalities are taking meaningful action. The California State Assembly passed Assembly Bill 32, the California Global Warming Solutions Act of 2006, and subsequent extensions. The legislation originally required California to reduce its greenhouse gas emissions to 1990 levels by 2020, a reduction of about 15% compared to continuing with “business as usual,” and now to 40% below 1990 figures by 2030. Assembly Bill 32 takes a multipronged approach to meeting the emissions reduction

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goal, including a cap-and-trade program, a move to cleaner energy sources, and measures directed at motor vehicles.

Through 2016, greenhouse gas emissions have continued to decline, with a steeper slope since 2008, even as the state's gross domestic product has increased.⁵ Because of the size of California and the scope of its economy, Assembly Bill 32 and subsequent legislation will have a significant impact and provide other states with a potential model for action. Municipalities are also taking action; for instance, in late 2017 New York City declared its intent to meet the terms of the Paris Climate Agreement. At the local level, there can be an economic rationale for a move to renewable energy sources; for example, Xcel Energy in Colorado is moving to generate the majority of its electricity through renewables, which will reduce costs.

ANTISCIENCE AGENDA

We are troubled by the particulars of the federal administration policies and by the way they are justified. We are concerned that there is a growing trend in the United States to deny scientific evidence on a range of important issues, replacing it with belief. The claims that climate change is a hoax or that it is not caused by human activities are symptomatic of a broader challenge to systematic and disciplined inquiry.⁶ We recognize that policy decisions stem from the integration of many considerations with the weight of scientific evidence, but evidence produced by organized, peer-reviewed scientific endeavor has long been the starting point. Perhaps no longer. Creation of doubt about science, a tactic

pioneered by the tobacco industry, has been used to slow decision-making for decades on environmental issues.

The present administration, comfortable with "alternative facts," whatever gap there may be between what is claimed and what is true, is feeding the anti-science agenda and appointing decision-makers who do not consider scientific evidence as holding primacy. Notably, the veracity of human-made climate change and the need for action has become politicized and linked to positions of US political parties, stereotypically the Democratic Party being the action-oriented "believers" and the Republican Party being the "business-as-usual" doubters. The Republican Party's stance fits well with the positions of some of its key supporters from the fossil fuel and chemical industries. Such political polarization of science is unfortunate and with regard to climate change quite recent. For example, Senator John McCain previously took positions favoring measures related to climate change and, looking back further, the Environmental Protection Agency was created in 1970 during President Nixon's Republican administration.

FOCUS ON STATE AND LOCAL LEVELS

We anticipate that most readers of *AJPH* are also concerned about the dismissal of evidence and expertise and the implications for evidence-based public health policy generally. At this moment in the United States, efforts to slow climate change might best be directed to the state and local levels, where some are heeding the scientific

evidence and taking meaningful action. *AJPH*

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REFERENCES

1. Friedrich J, Ge M, Pickens A. *This Interactive Chart Explains World's Top 10 Emitters, and How They've Changed*. Washington, DC: World Resources Institute; 2017.
2. Mathiesen K. India and China "on track to exceed Paris climate pledges." 2017. Available at: <http://www.climatechangenews.com/2017/05/15/india-china-track-exceed-paris-climate-pledges>. Accessed September 19, 2017.
3. The Economist. Subsidising coal production is a really bad idea. 2017. Available at: <https://www.economist.com/news/united-states/21732571-fierce-competition-federal-governments-worst-policy>. Accessed February 7, 2017.
4. Radu S. Toyota and Mazda join forces on electric vehicles. Is this the end of the road for gas cars? 2017. Available at: https://www.washingtonpost.com/news/wonk/wp/2017/08/03/three-european-countries-say-theyre-done-with-fossil-fueled-cars-can-the-rest-of-the-world-catch-up/?utm_term=.4c2577acdf11. Accessed March 20, 2018.
5. California Energy Commission. Greenhouse gas emission reductions. 2018. Available at: http://www.energy.ca.gov/renewables/tracking_progress/#ghg. Accessed March 20, 2018.
6. Otto S. *The War on Science*. Minneapolis, MN: Milkweed Editions; 2016.