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In the Absence of Congressional Action, Expect Executive Action to Advance U.S. Methane Reduction Goals in the Lead-up to COP26

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By: Stacey H. Mitchell, Kenneth J. Markowitz, Dasha K. Hodge, Samendra Prasad

The Pledge comes at a critical time in the context of both global efforts to reduce the rate of climate change and the Biden-Harris administration's broader goal of advancing significant, long-lasting climate progress. Accordingly, the Pledge focuses on not only absolute emissions reductions, but also on improving best practices for inventory methodologies from existing high-emission sources. The signatories claim successful implementation of the Pledge would result in a 0.2-degree Celsius reduction in global warming by 2050.

Methane's Importance as a Short-lived Climate Pollutant

Methane captures significant attention from political and scientific communities worldwide due to its outsized impact on global warming. Classified as a short-lived climate pollutant (SLCP), methane has a shorter lifespan in the atmosphere and a much higher energy absorption potential than carbon dioxide (CO_2). This combination means that, despite its short-lived nature, one ton of methane emissions has an impact equivalent to 28-36 tons of CO_2. SLCPs may account for up to 45 percent of climate warming and might exacerbate other environmental problems, such as the melting of Arctic ice and local air pollution.

Methane pollution is a multifaceted challenge, since the pollutant results from a number of activities central to modern life, including coal and gas production and use, rice cultivation, agriculture and waste disposal, biomass burning, landfills, and animal domestication. While these anthropogenic sources account for two-thirds of emitted methane, the single largest source of methane occurs naturally from wetlands in northern latitudes. The National Aeronautics and Space Administration (NASA) expects permafrost melting in the Arctic to

compound climate impacts by releasing an "influx" of methane into the atmosphere, a climate-change driver for which some global climate models do not account. Accordingly, scientists and policy-makers alike have suggested that urgent action is needed to address so-called "super pollutants," like methane.

Putting the Pledge in Perspective

The Pledge results from a renewed international focus on methane emission reductions. In February 2021, the United States rejoined the Paris Agreement, aligning once again with the nearly 200 countries that committed to limit their greenhouse gas emissions in an effort to keep global warming below 2 degrees Celsius, compared to pre-industrial temperatures. The United States further reaffirmed its commitment to the Paris Agreement by setting a goal of reducing its net greenhouse gas emissions by 50 to 52 percent by 2030, relative to 2005 levels.

Since then, the United States and other countries have expanded their climate commitments. For example, in June, the G7 nations committed to transitioning away from coal power, with the United States, United Kingdom, Canada and Germany pledging to collectively fund up to $2 billion to support the work of the Climate Investment Funds focused on accelerating the transition away from coal for key developing countries.

These and other international climate developments followed a flurry of activity from the Biden-Harris administration. On his first day in office, President Biden signed an executive order instructing the U.S. Environmental Protection Agency (EPA) to propose new performance standards and emission guidelines for methane from existing sources in the oil and gas sector. President Biden then introduced a $2 trillion infrastructure proposal, which included the goal of achieving a 100 percent carbon-pollution free electricity by 2035, and signed an executive order containing a goal to make at least half of all new vehicles sold in 2030 zero-emissions vehicles. The administration also revived the Interagency Working Group on the Social Cost of Greenhouse Gases, which updated and increased the "social cost" of methane, a figure used to inform cost-benefit analyses and justify environmental regulations.[1]

EPA's Methane Regulations

EPA implements a number of voluntary methane partnership programs, including Landfill and Coalbed Methane Outreach Programs aimed at the recovery, utilization and mitigation of methane emissions at the source, as well as the "AgSTAR" and "Natural Gas STAR" programs, which promote more efficient methane reducing technologies and practices. The agency's

most significant methane programs, however, are its regulatory standards governing emissions from the oil and gas sector.

EPA's methane regulations have a long and convoluted history. In 2012 and 2016, EPA finalized New Source Performance Standards for the oil and gas sector, which required methane emission reductions from new, reconstructed and modified sources, including hydraulically fractured oil wells and other equipment. The 2016 rule also contained requirements to locate and repair methane leaks. Toward the end of the Obama administration, EPA issued an information request to operators of existing sources of methane emissions in the oil and gas sector reduction, signaling its likely next step in regulation of emissions from the sector. During the Trump administration, however, EPA rescinded the information request and in 2020 eliminated the New Source Performance Standards applicable to oil and gas production and processing sources. In that roll-back rule, EPA promulgated an interpretation of the Clean Air Act that required the agency to make a pollutant-specific endangerment finding before it could regulate methane emissions from the oil and gas sector. Congress restored the Obama-era standards by rejecting the Trump administration's 2020 rulemaking under the Congressional Review Act, effectively reinstituting the Obama-era methane standards (except for certain "technical" amendments to the 2016 rules governing fugitive emissions, alternative means of emissions limitations, pneumatic pump standards, storage vessels and engineering certifications) and the historical interpretation of the Clean Air Act.

EPA's focus on methane emission reductions at the agency is now back where it was in 2016. As noted above, President Biden ordered EPA to promulgate new performance standards and emissions guidelines for methane from existing sources in the oil and gas sector. Although EPA did not meet the President's September 2021 deadline to propose those rules, the agency is close to releasing them. Unsurprisingly, industry sources report that the new rules will be more stringent than those currently on the books for new methane emission sources from the oil and gas industry. Expect the agency to focus significantly on ways the industry can identify and repair methane leaks, such as standards intended to force field operators to use innovative, recently developed technologies to reduce leakage on the oilfield and in pipelines. In the absence of noteworthy climate action on Capitol Hill, EPA regulations and federal funding initiatives will need to target methane emissions in order to meet the President's ambitious environmental agenda.

Looking Ahead to Glasgow

Expect EPA's forthcoming methane emission regulations to become the centerpiece of the Biden-Harris administration's climate-focused efforts leading to COP26, and beyond. While significant international attention has focused on CO_2 over the last few decades, the Global Methane Pledge and the Biden-Harris administration's recent actions suggest that methane reduction initiatives will play an even larger role in the coming years. The oil and gas sector may face the most pressure, but expect certification and offset programs and other major sources of methane emissions—such as coal, agriculture and landfills—to receive attention as well.

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[1] Currently, interim social cost of methane figures are in effect. President Biden ordered the Interagency Working Group to publish final figures by January 2022.

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