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Comments on blog by David McCabe of the Clean Air Task Force  
("EPA's Clean Power Plan reduces climate pollution – despite leaks from natural gas")

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by

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In his blog of June 5 (<http://www.catf.us/blogs/ahead/2014/06/05/epas-clean-power-plan-reduces-climate-pollution-despite-leaks-from-natural-gas/>), David McCabe comes to the defense of the new EPA draft plan for reducing carbon dioxide emissions from the electric power sector in the US. He starts by acknowledging that the plan will lead to greater consumption of natural gas and greater methane emissions. But he then goes on to say that this will not be bad for climate, for two reasons: 1) the plan also calls for more electricity production from renewables and for reduction in demand; and 2) methane is generated from using coal as well as when using natural gas.

With regard to point #1, I fully agree that reducing demand for electricity, generating electricity from renewable sources (wind and solar), and using electricity more efficiently is essential. In Jacobson et al. (2013), we lay out a plan to convert the entire energy economy of the State of New York (including transportation, heating, and industrial uses in addition to electricity) completely away from fossil fuels to renewable energy in a cost-effective way using technologies that are commercially available today, with most of the conversion occurring by 2030. Our plan calls for no use of natural gas, and neither the EPA nor McCabe have produced evidence for the need to use natural gas as part of the nation's electric generating capacity as we move forward.

With regard to point #2, far less methane is released when using coal than when using natural gas to generate electricity (Howarth et al. 2011, 2012; Howarth 2014). While methane emissions dominate the greenhouse gas footprint of natural gas, they are a small component of the footprint for coal. None of the scientific literature of the past several years contests the point that methane emissions are a minor component of the greenhouse gas footprint of coal, so it is misleading for McCabe to highlight methane from coal.

While McCabe states "EPA is on the right side of the science," he also notes that he and most other scientists believe the EPA is severely under-estimating the extent of methane emissions. And for his analysis, McCabe uses the latest science from the IPCC (2013) for comparing methane and carbon dioxide: a global warming potential of 86 for methane considered at an integrated 20-year time scale. EPA does not use the best and latest science. Rather, against the guidance of the IPCC (2013) report, they focus just on an integrated 100-year time frame and use outdated estimates for the global warming potential of methane. As a result, the EPA analysis severely under states the problems of methane

emission from natural gas systems. See my separate statement on the EPA draft plan (Howarth statement of June 7, 2014).

McCabe gives a summary of his back-of-the envelope analysis of how methane emissions may affect the EPA plan. He does not provide sufficient detail in his blog to evaluate this analysis. But note that he does NOT compare the consequences of using coal vs. natural gas. The best and most recent science indicates that the greenhouse gas footprint of generating electricity using natural gas is larger than that of coal when considered over a 20-year integrated time frame. Consequently, any plan that uses gas-for-coal switching as one of the major four building blocks for future electricity generation and use is misguided. Again, see my separate statement on the EPA draft plan (Howarth statement of June 7, 2014).

My bottom line: the EPA draft plan released earlier this week on carbon pollution from electricity generation is deeply flawed since it focused solely on carbon dioxide, severely understated the role of methane in global warming, and failed to address methane emissions as part of the goal of reducing total greenhouse gas emissions. EPA got this part of their science fundamentally wrong.

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