

COMMENTARY

ENVIRONMENTAL LAW

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Adapting to Climate Change, Regardless of Your Viewpoint

Climate change has been in the general and legal news a good bit lately. Most of the news has to do with whether or how the federal and state environmental regulators ought to limit emissions of greenhouse gases. You see less discussion of whether or how the government or enterprises ought to adapt to the likelihood of change. Adaptation seems less controversial and more likely to create opportunity for those who do it right.

This column is not about any controversy over climate change. Some contend that there is scientific debate over whether the climate is changing, and whether that change results from human activity. Others insist that the scientific community has reached a consensus that human activity has caused Earth to warm since the beginning of the Industrial Revolution.

That dispute should not matter much to most reading this column. Whichever side of that divide you are on, it is a reasonable bet that there is no evidence that would convince you that you are wrong. Moreover, if you are reading a column in a publication of ALM, it is a reasonable bet that you have no Ph.D. in a relevant discipline, and cannot review the scientific literature critically in any event.

Nevertheless, you should feel confident that the weather seems to display greater fluctuation than was thought to be "normal" at the time that most of our infrastructure — roads, bridges, ports, railroads, buildings, storm sewers and so forth — was designed and built.

The number of hot days seems to be higher than one would expect from historical weather records. The frequency of storms of a given severity or floods of a given height seems greater than one would expect. Whether the weather is more volatile than we thought, or Earth is warming, really makes no difference

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to the need to rethink our infrastructure.

Climate change policy typically categorizes activities to rebuild infrastructure or to reconfigure activities as adaptation. That allows policymakers to distinguish those steps from mitigation.

Mitigation includes efforts to avoid or to slow climate change. Generally, mitigation in the United States takes the form of reducing the emission of greenhouse gases or sequestration of greenhouse gases in another form. Energy efficiency reduces combustion to power electricity generation or vehicles. Switching fuels may reduce greenhouse gas effects: burning natural gas emits less carbon dioxide per unit of energy than does coal; burning landfill gas reduces the greenhouse gas impact of the methane that of carbon dioxide; nuclear fuel may have no greenhouse gas emissions.

Adaptation seems sensible, whether or not you believe that human activity is causing climate change. Perhaps the weather is only more variable than we thought. That does not mean that a flood is any less a flood. It does not mean that Sandy was any less of a superstorm.

Moreover, adaptation holds out the possibility of competitive advantage. If, for example, Pennsylvania's transportation infrastructure better withstands extreme weather events than competing regions' roads, railroads and ports, then Pennsylvania will be a more desirable place for business to locate.

Other infrastructure improvements can also affect competitive advantage by anticipating a call for mitigation. If one can conduct business with less of a carbon footprint, then one gains an advantage over competitors when, as is probably inevitable, the government regulates greenhouse gas emissions.

But the news has been about mitigation, with more mitigation news to come. On September 20, the U.S. Environmental Protection Agency re-proposed new source performance standards (NSPS) for greenhouse gas emissions from electric utility generating units.

They are posted at <http://goo.gl/SKxCKI>, but have not appeared in the Federal Register as of this writing due to the government shutdown. The EPA has proposed to require new coal-fired power plants to meet an emission standard that the EPA says is achievable using carbon capture and sequestration technology. Natural gas-fired power plants must meet a more stringent standard, but one that will generally be achievable without innovative technology.

On September 30, the Congressional Research Service issued Report R43127 to Congress evaluating many of the policy claims surrounding these NSPSs for greenhouse gases. It concluded that the NSPSs will have

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little effect on the power or coal industry because they apply only to new plants, and the price of natural gas makes development of new coal-fired plants very unlikely in the foreseeable future. The standards do not affect existing coal-fired plants that will continue to buy and burn coal. By the same token, the standards will not have the claimed "technology-forcing" effect on development of carbon capture and sequestration technology, because no coal-fired plants will be built that need it.

The EPA must issue an NSPS under Section 111 of the Clean Air Act for a category of stationary sources if, in the administrator's judgment, "it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." Of course, the EPA initially made a finding that greenhouse gas emissions from mobile sources — cars and trucks — did not "endanger public health or welfare" under Section 202 of the Clean Air Act, 42 U.S.C. § 7521(a)(1). The U.S. Supreme Court vacated and remanded that finding in *Massachusetts v. EPA*, 549 U.S. 497 (2007), on terms that effectively forced the EPA to find that endangerment. The EPA ultimately issued the Endangerment Finding, 74 Fed. Reg. 66,496 (Dec. 15, 2009), dictating

issuance of not only the mobile source standards, but also the NSPS for power plants.

The finding concludes that man-made emissions of greenhouse gases may reasonably be anticipated to cause climate change. It was challenged and upheld by the U.S. Court of Appeals for the D.C. Circuit in *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102 (D.C. Cir. 2012), *petit. for cert. pending*, No. 12-1253 (U.S. filed Apr. 17, 2013).

Meanwhile, on September 27, the Intergovernmental Panel on Climate Change issued the first installment of its fifth assessment report, "Climate Change 2013: The Physical Science Basis." In its summary for policymakers, the IPCC described as "unequivocal" the evidence that, on average, Earth is warming. Moreover, the report suggests that even if all of the world's economies took aggressive steps to reduce the emission of greenhouse gases, a lot of that warming would nevertheless occur and would continue for hundreds of years. The IPCC is a group of several hundred scientists established by the United Nations in the 1980s that surveys, evaluates and reports on climate science research. Every several years, the panel issues an assessment report. The last was in 2007.

All of this, of course, goes to whether emissions of greenhouse gases affect climate, and, if so, how to mitigate that effect. It does not go to adaptation. The IPCC adaptation report comes later, and the Clean Air Act does not call for the EPA to regulate to require adaptation. Indeed, the EPA regulation of new infrastructure probably impedes adaptation, rather than requires it.

Pennsylvania does have a Climate Adaptation Planning Report issued earlier this year by the Department of Environmental Protection, No. 2700-RE-DEP4303 (Feb. 14, 2013). In addition, the Climate Change Advisory Committee has prepared committee reports addressing, among other things, mitigation by infrastructure improvement. Maybe it is time to focus on and to fund large adaptation projects. Clean Air Act regulation is interesting, but the price of natural gas may do the EPA's work for it. •