On April 16, 2010, Mary Nichols presented a defense of the Clean Air Act for regulating greenhouse gas emissions at the Environmental Law and Policy Annual Review (ELPAR) annual conference in Washington, D.C.

Her commentary responds to an article by Georgetown University law professor Richard J. Lazarus: *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1159-61 (2009). It was scheduled to appear in a special issue of the Environmental Law Reporter, published in collaboration with the Vanderbilt University Law School and the Environmental Law Institute in Washington, DC.

Comment on *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*

Mary D. Nichols*

* Mary D. Nichols was appointed by Governor Arnold Schwarzenegger as the Chairman of the California Air Resource Board in July 2007 and previously held that position under Governor Jerry Brown from 1978 to 1983. Among other positions, she served as the Assistant Administrator for Air and Radiation in the United States Environmental Protection Agency under President Bill Clinton, as Secretary for California's Resources Agency under Governor Gray Davis, and as Director of the University of California, Los Angeles, Institute of the Environment. She holds a Juris Doctorate from Yale Law School and a Bachelor of Arts from Cornell University. The views expressed in this article are her views and not those of the Board or of the State of California.

Perhaps Congress should throw up its hands and move on to something more manageable than global climate change. Professor Richard Lazarus asserts that the challenges of enacting effective national strategies for mitigating and adapting to changes in the Earth’s climate are not just “wicked,” but “super wicked,” meaning they defy resolution.[1] He enumerates seemingly insurmountable challenges, such as “the absence of an existing institutional framework of government with the ability to develop, implement and maintain the laws necessary to address a problem of climate change’s tremendous spatial and temporal scope.”[2] Imagine trying to design a house to last decades without studs, beams or columns.

Fortunately, our federal lawmakers are not as ill-equipped for the climate challenge as Professor Lazarus’s article might suggest. In fact, they already have at hand a sturdy, time-tested frame to support a good part of the United States’ response to climate change. Congress engineered it 40 years ago in the form of the Clean Air Act.[3] That landmark law and its subsequent amendments incorporate several of the “precommitment strategies”[4] and other designs that Professor Lazarus recommends for effective federal climate legislation.

---

[1] Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1159-61 (2009). [Lindsey Winthrop ADD ELI cite]

[2] *Id*. at 1160.
[3] Clean Air Act, 42 U.S.C. §§ 7401-7671q.
[4] Lazarus, *supra* note 1, at 1189-93.

Congress amended the Act substantially only twice since 1970.[5] This fact alone attests to the law’s strength of being at once flexible and protective against “powerful short-term impulses”[6] to unravel it.

One of the greatest successes of the Clean Air Act has been its ability to catalyze innovation that achieves emission reductions faster and more cheaply than industry had expected. Rigorous performance-based standards with long lead times and phase-in periods have allowed industry to unleash its engineering ingenuity on emission controls and implement them cost-effectively.

I have studied, implemented and worked with the Clean Air Act for more than 30 years. As a state air agency official from a state that has often taken its own path and made giant strides toward clean air since the 1970’s, I have many ideas for improvement. In my experience, the Act has proven extraordinarily effective in protecting the health and prosperity of our nation. And I have every reason to believe that it will play a vital role in addressing climate change. The Act offers the best available strategies to accelerate the nation’s transition to clean, efficient and secure energy. The most developed and deployable of these measures – those affecting vehicles, fuels and power plants – also are the ones most important to launch as soon as possible. President Obama’s Administration took the first step earlier

[5] Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 1, 91 Stat. 685 (1977); Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).
[6] Lazarus, *supra* note 1, at 1157.

this year in putting the nation's first limits on greenhouse gas emissions from passenger vehicles.[7]

Regulations under the Clean Air Act could complement a market-based program to reduce greenhouse gas emissions. Economic analyses of the California climate program show that an economy-wide cap-and-trade system or a similar market approach is needed to achieve our state's emission reduction targets, and to do so cost-effectively; traditional controls simply cannot adequately cover the full range and depth of carbon sources embedded in our economy.[8] Yet a market-based program alone also cannot achieve the volume of emission reductions needed, at least not in time to avoid potentially disastrous effects of climate change on public health and the economy. Smartly targeted controls can accelerate the shift to clean and efficient energy technologies.

The transportation sector is a plump target. It accounts for about one-third of U.S. global warming pollution, more than half from passenger vehicles.[9] A national low-carbon fuels standard for passenger vehicles,

---

[7] Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, U.S. Environmental Protection Agency and National Highway Traffic Safety Administration. April 1, 2010 (to be published at 75 Fed.Reg. [X]), available at: <www.nhtsa.dot.gov/staticfiles/DOT/NHTSA/Rulemaking/Rules/Associated%20Files/CAFE-GHG_MY_2012-2016_Final_Rule_v2.pdf> (accessed April 14, 2010).

[8] *Updated Economic Analysis of California's Climate Change Scoping Plan*, California Air Resources Board (March 24, 2010), available at: <www.arb.ca.gov/cc/scopingplan/economics-sp/economics-sp.htm >(accessed April 14, 2010).

[9] See *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007*, U.S. Environmental Protection Agency (April 2009). www.epa.gov/climatechange/emissions/usinventoryreport09.html

promulgated under Section 211 of the Clean Air Act, would accelerate deployment of advanced biofuels, plug-in hybrids and natural gas and hydrogen-powered fuel cell vehicles -- all the while strengthening the nation’s energy security and saving consumers fuel costs.[10] Already adopted in California, a low-carbon fuels measure would build off the federal Renewable Fuels Standard and eventually supersede it.[11]

At the risk of stating the obvious, the Clean Air Act already is working to reduce greenhouse gas emissions with remarkable cost-effectiveness from mobile and stationary sources. The current phasing in of more stringent federal standards for ozone and particulate matter yields, at no additional cost, real reductions in greenhouse gas emissions and, more importantly, reductions in premature deaths and illnesses, lost workdays and health care costs.[12]

Professor Lazarus cites federal preemption of states’ rights as one of the daunting political challenges of enacting federal climate legislation.[13] Yet a key lesson in the history of the Clean Air Act is that the enlistment of state and local regulators is critical to implementing and enforcing a program as complex as air quality. Under the Act, the United States Environmental Protection Agency (EPA) has set the National Ambient Air Quality Standards, while state and local

---

[10] 42 U.S.C. § 7545.
[11] Cal. Code Regs, tit. 17. §§ 95480-90.
[12] National Ambient Air Quality Standards for Ozone, Part II and V, Final Rule, 62 Fed. Reg.138 (July 18, 1997) (to be codified at 40 C.F.R. pt. 50).
[13] Lazarus, *supra* note 1, at 1228 (“The extent to which federal law preempts state climate change law is likely to be one of the most significant policy disputes in the drafting of the federal legislation during the next four years”).

agencies have developed strategies for implementation and enforcement of those standards. The EPA generally has approved any mix and match of localized, state or federal regulation as long as it works in a fair and efficient manner.[14]

The Waxman-Markey climate bill[15] includes numerous references to the required State Implementation Plans, or SIPs.[16] California and other states with climate action plans think the final federal climate bill should include incentives for states to prepare a unified climate action plan.

Under a federal system with a cap and trading of federal allowances, no further EPA review of SIPs should be needed. But federal agencies (e.g. Department of Transportation, Department of Energy, Forest Service) should use these plans as guidance in awarding grants or managing resources in states that have adopted them.

Adapted to a federal climate law, this system of “cooperative federalism” would bring the same benefits: a national floor of minimum standards, flexibility in how to meet those standards and room for states to exceed them. Moreover, cooperative federalism would leverage resources at every level, reducing the enormous task of reducing greenhouse gas emissions nationwide into more manageable pieces, from utility regulation to local land-use planning.

Land-use controls are clearly a local prerogative. But that should not automatically exclude them from

---

[14] Zygmunt J.B. Plater, et al., ENVIRONMENTAL LAW & POLICY 443 (2d ed).
[15] American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009) (passed House June 26, 2009).
[16] See *id.* §§ 203, 204.

consideration in a federal climate change program, especially given the long-lived emissions embedded in our built environment. Far from viewing land-use controls as “federal environmental law’s third rail,” as Professor Lazarus puts it, the federal government should reward communities with transportation plans that substantially reduce the number of vehicle miles travelled per household.[17] These communities should receive technical and financial help for scenario-based modeling to ensure planning decisions are cost-effective and improve energy efficiency. There’s no need to wait for federal climate legislation to act. These incentives and resources can and should be included in the federal Surface Transportation Act reauthorization bill.

The Clean Air Act is well suited for regulating the largest greenhouse gas emissions. It addresses both vehicles and fuels, allowing the transportation sector to be treated as a system. Some of the most cost-effective smog-control measures and dramatic percentage reductions in smog -forming pollutants occurred early in the Act’s history – as they should in attacking climate-altering pollution.

The federal vehicle emissions regulation announced April 1 shows how the Clean Air Act works cost-effectively in tapering greenhouse gas emissions. Starting with the 2012 model year, automakers must improve the average fleetwide efficiency of their cars and passenger trucks by roughly 5 percent each year until they reach the rough equivalent of 35.5 miles a gallon in 2016.[18] The change is estimated to

[17] Lazarus, *supra* note 1, at 1164.
[18] See *DOT, EPA Set Aggressive National Standards for Fuel Economy and First Ever Greenhouse Gas Emission Levels For*

save 1.8 billion barrels of oil in the vehicles' lifetime and cut greenhouse gas emissions by 960 million metric tons in the same period – the equivalent of removing 50 million cars from the road.[19] Because auto manufacturers can meet the rules using existing technologies, consumers will not be paying much more for the more efficient vehicles – perhaps spending an extra $950 by 2016. And the fuel savings over the life of the vehicle will more than make up for those added costs, averaging $3,000 in net savings.[20]

The new emissions-reduction rule, modeled after a standard California pioneered, also shows that, beyond the Clean Air Act, Congress has another cache of climate change policy tools at hand: California's Global Warming Solution Act – Assembly Bill 32 – and the California Air Resources Board's Scoping Plan for implementing the law.[21]

The federal government could begin by setting a national low-carbon fuel standard patterned after California's rule. A clear carbon limit, a long-term planning horizon and use of an emissions trading market is harnessing the technical ingenuity and economic resources to achieve our state's required 10 percent reduction in carbon intensity of fuels by 2020.[22] Engineers and entrepreneurs will decide

---

Passenger Cars and Light Trucks (EPA-DOT joint news release) April1, 2010.

[19] *Id*.

[20] *Id*.

[21] California's Global Warming Solutions Act of 2006, CAL. HEALTH & SAFETY CODE §§ 38500-99 (Stats. 2006, ch. 488)

[22] California Air Resources Board, Initial Staff Report, Final Statement of Reasons and approved regulation, available at: <www.arb.ca.gov/regact/2009/lcfs09/lcfs09.htm > (accessed April 14, 2010)

how best to meet the fuel standard, and the market will reward breakthrough ideas and technologies.

California has not waited for Congress to act. We will continue to adopt regulations and policies that accelerate our shift to a low-carbon economy that will add jobs and create savings in energy costs. We have developed some valuable experience that can help inform the federal debate, particularly our deployment of Clean Air Act strategies. Combating climate change demands broad, multifaceted, and interdependent approaches. We cannot rely solely on the current Clean Air Act. Congress also must set a firm, aggressive and achievable economy-wide cap on greenhouse gas emissions. In the meantime, the Clean Air Act offers powerful, common-sense and cost-effective tools to start cutting those emissions from the largest sources – vehicles, fuels and power plants. The most expensive thing we can do is nothing.