

## Enforcement Epiphanies And What to Do About Greenhouse Gases

By G. Tracy Mehan III

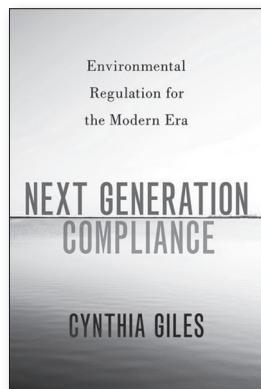
“THERE is a great deal of ruin in a nation,” said Adam Smith. Cynthia Giles sees things similarly with respect to environmental enforcement and regulatory compliance. The former is never up to the task, and the latter is less than stellar.

In *Next Generation Compliance: Environmental Regulation for the Modern Era*, the former Obama EPA enforcement chief seeks to set matters right, putting emphasis on smarter rule-making that necessitates or compels compliance by regulated entities while reserving limited enforcement resources for more strategic or innovative pursuits.

“We know now that the dual assumptions at the foundation of nearly all environmental regulations—that most companies comply and that it is up to enforcement to take care of the rest—are wrong. In fact, serious violations are widespread. And the principal driver of outcomes isn’t enforcement, it’s whether the regulations are tightly structured to make compliance the path of least resistance, so compliance is good even if enforcement never comes knocking,” writes Giles. “These essential truths are the difference between a rule that is great in theory and one that delivers emission reductions in real life.”

Summarizing an extensive body of research by the Government Accountability Office, EPA programs, its Office of Inspector General, and independent scholars, Giles maintains that the “rate of serious non-compliance—violations that pose

the biggest risk to public health and the environment—is 25 percent or more.” Serious noncompliance rates for large facilities are 50 to 70 percent or more. Inspections and enforcement actions can never get ahead of the curve. In addition, drafting regulations on the assumption of 100 percent compliance, leaving enforcement to deal with the outliers, distorts the benefit-cost analysis.



**Next Generation Compliance: Environmental Regulation for the Modern Era.** By Cynthia Giles. Oxford University Press; 293 pages; \$29.99.

**Unsettled: What Climate Science Tells Us, What It Doesn't, and Why It Matters.** By Steven E. Koonin. BenBella Books, Inc.; 306 pages; \$24.95.

Next Generation compliance is “about designing a rule so that compliance is the default.” That is her thesis. Simplicity, elegant design, and new technologies allowing for real-time monitoring, electronic reporting, and sophisticated analytics “will put pressure on companies for better performance at the same time that they make it harder to hide.”

Giles is a full-throated defender of command-and-control regulation and enforcement but is honest about its failures. Unfortunately, she parts ways with many critics of traditional regulation who might, in fact, concur with many of her recommendations.

One chapter of her book has the unfortunate title, “The Ideologues:

Performance Standards and Market Strategies.” Government is a political game, and that game is won by addition not subtraction. While the author claims to “eschew[] ideology,” she spends too much capital on ideological score-settling rather than seeking common ground and points of convergence.

For instance, Giles is generous in her praise for the premier market-based program of all time, the acid rain cap-and-trade program authorized by the Clean Air Act Amendments of 1990. It was supported by only one environmental group at the time, the Environmental Defense Fund, to its everlasting credit. She rightly points out that, for the program to work, there had to be rules of the game, so to speak, as well as program design elements that were essential to maintaining the integrity of sulfur dioxide trades, specifically continuous emissions monitoring systems (CEMS) and reporting among others.

Notes Giles, “When the monitoring equipment was not working properly, the utility was required to report emissions using very conservative assumptions. If the CEMS weren’t operating reliably, the company had to assume emissions that were most likely much higher than its actual emissions”—a powerful incentive for power utilities to make sure the system was working properly. There were also automatic penalties for companies that didn’t have enough credits or allowances and reductions.

In Giles’s judgment, “The Acid Rain Program . . . worked well not because it was a market program, but because it created a regulatory box so tight that compliance was the only way out.” Still, she argues that many proponents of environmental markets learned the wrong lessons from the program. “Take away cap and trade, and the com-

# In the Literature

pliance outcomes would have been the same.”

This is not a plausible claim given that the “box” wouldn’t matter but for Ronald Coase’s Theorem and the control-cost differential of different sources in the utility sector creating huge incentives to trade. In truth both the market element and the rules guiding its establishment were necessary but not sufficient conditions of success. They were mutually dependent.

Both Giles and the “Ideologues” have a point. Careful program design and sound rules, command and control if you will, are important as are the laws of economic behavior and incentives. She is not wrong when ultimately declaring that “the success of markets depends on skillful use of command and control.”

The most useful and lasting contribution of *Next Generation Compliance* is to be found in Chapter 5, “Next Gen Strategies. A Playbook.” There Giles demonstrates her savvy and experience with compliance issues and offers a smorgasbord of techniques which she believes can establish compliance as the default option in environmental rulemaking.

Continuous monitoring; self-reporting of facts, not conclusions; third-party verification and auditing; third-party information reporting; data analytics; machine learning, and other tools are described in detail and with granularity. Some recommendations may be problematic, depending on circumstances, such as shifting the burden of proof and requiring a company to prove that it is not in violation when, say, satellite data detects a polluting incident. But technological developments are clearly creating new ways to optimize compliance in all environmental programs.

In terms of cumulative impact, one does wonder about, first, the costs of Next Gen requirements, hardly mentioned in the book, and second, at what point Next Gen crosses the line into the “Surveillance State.” These concerns are implicated

in the upcoming Supreme Court case dealing with the *Chevron* doctrine and a challenge to a rule requiring fishing vessel owners to pay the costs of federally mandated monitors. Next Gen at sea?

Cynthia Giles offers three chapters on dealing with “the existential crisis of climate change,” applying Next Gen thinking to issues of zero-carbon electricity, the past mistakes of low-carbon fuels, and innovative strategies to cut methane emissions from over a million oil and gas wells in the United States.

*Next Generation Compliance* is a challenging and stimulating book. It bears careful study, and it should be the basis for lively discussion within EPA and the environmental policy community generally. One can read Giles as not just a compliance and enforcement authority, but as one who seeks to rectify one of the classic causes of market and regulatory failure—asymmetric information.

**A**NOTHER former Obama official has a very different take on climate change. Steven E. Koonin served as undersecretary for science at the Department of Energy. A graduate of Caltech and with a Ph.D. from MIT in theoretical physics, he is a member of the National Academies and has published over two hundred peer-reviewed papers on astrophysics, scientific computation, energy technology, and climate science.

He is also a professor at New York University.

In *Unsettled: What Climate Science Tells Us, What It Doesn’t, and Why It Matters*, Koonin acknowledges warming during the past half century but believes that limited observations and understanding are insufficient to usefully quantify either how the climate will respond to human influences or how it varies naturally.

“However, even as human influences have increased five-fold since 1950 and the globe has warmed modestly, most severe weather phenomena remain within past variability. Projections of future climate weather events rely on models demonstrably unfit for the purpose,” claims Koonin. Moreover, “Most extreme weather events show no long-term trends that can be attributed to human influences on the climate.” He goes through all the data on hurricanes, sea level, GDP, forest fires, and the like.

The most compelling part of this technical, dense book is its prudential argument that the quest for a carbon-free world is a “chimera” (Chapter 12). It is “essentially impossible.” The concentration of carbon dioxide in the atmosphere grows by roughly half of the amount emitted each year, the result of cumulative emissions over time remaining there for centuries. Moreover, global energy demand is expected to grow by 50 percent through mid-century. The math is not kind.

Given Koonin’s pessimism he call for “Plans B,” plural, specifically geoengineering and adaptation. The former idea is untested but merits greater research. The latter is common sense. Adaptation, notes Koonin,

is agnostic as to causes, proportional in response, locally driven, autonomous (spontaneous), and effective—as demonstrated by the Dutch and human beings living

everywhere from the Arctic Circle to the tropics. It needs to be elevated as a policy and program comparable to mitigation.

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**Two former Obama officials wrestle with some big issues in environmental policy**