Least-Risk Planning

The *Homer City* decision increases uncertainty—but rewards forward thinking.

By Kenneth Colburn, et al.

The D.C. Circuit's *Homer City* decision doesn't eliminate the uncertainty about environmental regulations that has vexed public utility commissions, the utilities they regulate, and the investment community for more than a decade. At a minimum, it extends that uncertainty farther into the future, and arguably adds new levels of uncertainty where issues had been largely resolved.

No regrets, risk-reducing solutions—incorporating energy efficiency and demand response, including clean distributed generation—can cut through the fog of uncertainty and serve the public interest regardless of how these issues unfold. In the wake of *Homer City*, these risk-mitigation concepts make as much sense today as they did before the D.C. Circuit issued its CSAPR decision.

Prescient NARUC Exercise

The National Association of Regulatory Utility Commissioners (NARUC) ended its Summer Committee Meetings with an innovative interactive workshop designed to give participants an opportunity to experiment with different strategies for responding to a complex set of market, policy, technological, and regulatory conditions.[1] Workshop participants received a whirlwind introduction on existing and proposed environmental regulations and technology options available to meet these requirements while also maintaining reliability. Next, participants were assigned to groups, each of which was to act as the energy portfolio manager for a fleet of generating units, each with a distinct set of attributes, in a multi-round simulation game.

With this foundation, the first round of the workshop challenged the portfolio managers to comply with the new federal Mercury and Air Toxics Standards by retrofitting, refueling, or replacing existing assets, along with utilizing additional options—renewable energy, energy efficiency, and demand response resources. During the process, groups were also presented with setbacks, such as construction delays, permitting issues, and court appeals. Portfolio managers who had failed to consider these risks scrambled to implement new strategies to comply with the standards within the timeframe allowed in the Clean Air Act and maintain reliability.

In subsequent rounds of the game, the portfolio manager groups tackled the Cross-State Air Pollution Rule (CSAPR); New Source Performance Standards for greenhouse gas emissions; the Clean Water Act's Section 316(b) restrictions on cooling water intake structures; a price on carbon emissions; a moratorium on hydraulic fracturing; natural gas price volatility; a national clean energy standard; and rapid, energy-intensive economic recovery. The final round results were clear: the groups that planned earliest for future risks, and employed a diverse portfolio of low-risk resources including energy efficiency, demand response, and renewable energy, achieved the best long-term outcomes in terms of superior reliability and lower overall costs.

The immediate effect of the D.C. Circuit's *Homer City* decision is to perpetuate the profound regulatory uncertainty clouding the future of the electric power sector.

The results of the workshop thus elicited two instructive insights for energy portfolio management: First, plan ahead. Planning strategically and comprehensively for all foreseeable contingencies, while including risk explicitly in long-term portfolio planning, produces superior outcomes for purposes of reliability, compliance, and cost when compared with reacting to contingencies one at a time as each one arises. Second, keep your options open. Courses of action that maintain more options can have real benefits—even over alternatives that initially appear to represent lower costs—when it comes to managing future risk.

As if to demonstrate the importance and applicability of these insights, only one group actually succeeded in achieving environmental compliance, maintaining reliability, and controlling costs in its electric generating fleet. This group planned ahead, started early, and undertook a comprehensive strategy involving energy efficiency that reduced multiple pollutants simultaneously, lowered costs, and contributed to reliability. The groups that reacted to only one set of circumstances at a time, not taking into account future risks, suffered rapidly increasing costs, an inability to maintain reliability, and delays in complying with regulations.

NARUC's simulation game was, it turns out, somewhat clairvoyant. In a case of life imitating simulation—instead of vice versa—the U.S. Environmental Protection Agency's (EPA) CSAPR was vacated by the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) on Aug. 21, 2012 in its ruling in *EME Homer City Generation, L.P. v. EPA*.[2] The ruling temporarily leaves in place EPA's Clean Air Interstate Rule (CAIR), the regulation that CSAPR was intended

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to replace, which itself had been vacated by the D.C. Circuit in 2008.[3] While perhaps not causing unbridled "regulatory chaos" as suggested in the trade press,[4] *Homer City* does introduce substantial uncertainty about the development and application of a regulatory successor to CSAPR and other air pollution control requirements going forward.

Homer City rejects both EPA's methodology for determining state SO_2 and NO_x budgets based on control costs rather than contribution to downwind air quality, and EPA's administrative approach to allocating allowances within state budgets based initially on federal rather than state implementation plans. *Homer City* does not, however, reject the fundamental problem that CSAPR was intended to address: the fact that air pollutant emissions from numerous upwind states today impede the ability of downwind states to meet federal air pollution requirements. The Clean Air Act still prohibits states from doing this, and requires EPA to develop regulations to ensure that it doesn't happen.[5] So while the decision clearly sends EPA "back to the drawing board," the underlying problem of transported pollution remains.

As a result, *Homer City* creates significant regulatory ambiguity and raises a host of questions. EPA has asked the D.C. Circuit for a full *en banc* rehearing. Will this request be granted, and what outcome might it yield? Might a further appeal be made to the Supreme Court? When will EPA issue a follow-up regulation to address interstate pollution, and will it succeed where CAIR and CSAPR failed? In CSAPR, EPA identified 28 "upwind" states as significant contributors to nonattainment of one or more federal health-based standards in a "downwind" state, and thus required that the upwind states reduce emissions. Will a regulation that replaces CAIR and CSAPR implicate the same list of states, or might some states be added to or dropped from the list? Downwind, nonattainment states have deadlines for reaching attainment. If they fail to reach attainment, they can be bumped up to a higher nonattainment classification, which imposes more stringent regulations and sanctions. What options will such states have now that CSAPR has been vacated? Will states be allowed to continue using compliance with CSAPR as an element of their state implementation plans (SIP) or will EPA need to require the revision of those SIPs?[6]

The court rejected EPA's application of cost factors in determining state emission budgets. Does this mean that cost has no place in determining the appropriate level of reductions or where they can be achieved most cost-effectively? Must each upwind state now become responsible for its share of downwind effects regardless of the cost? Health-based air quality standards are established under the Clean Air Act for the purpose of protecting public health and welfare. What are the ramifications of this delay in implementing CSAPR or its successor on societal health?

Finally, EPA's Mercury and Air Toxics Rule (MATS)—which is also currently being challenged before the D.C. Circuit—calls for coal- and oil-fired electric generators to reduce emissions of mercury and acid gases, and it will require installation of many of the same control technologies that would have been used to achieve reductions under CSAPR.[7] How will the fate of the MATS rule and its ultimate implementation affect the sources and the levels of emissions of the pollutants that would be subject to a CSAPR successor?

CSAPR's goal was to ensure that upwind, emitting states don't impede attainment by downwind states of several current health-based air quality standards including the 1997 annual particulate matter ($PM_{2.5}$) standard, the 2006 24-hour $PM_{2.5}$ standard, and the 1997 8-hour ozone standard. However, by the time a CSAPR successor is developed, the applicable federal ozone and particulate standards might be much different because the Clean Air Act requires that they be updated regularly to reflect the latest science. In fact, a newer, more stringent 8-hour ozone standard was already adopted in 2008, and a further strengthening of it and the $PM_{2.5}$ standard is anticipated in 2014 or 2015. Thus, CSAPR's replacement will ultimately need to ensure that upwind states don't contribute significantly to downwind neighbors' inability to meet the newer, more stringent standards that are applicable when it's finally implemented.

A low-risk, diverse portfolio—incorporating energy efficiency, demand response, and renewable energy—can achieve superior reliability and lower overall costs.

Implications for Energy Regulators

The D.C. Circuit's *Homer City* decision doesn't eliminate the uncertainty about environmental regulations that has vexed public utility commissions, the utilities they regulate, and the investment community for more than a decade. At a minimum, it extends that uncertainty farther into the future, and it arguably adds new levels of uncertainty where issues had been largely resolved. Even EPA anticipates that, "No matter [what's decided] on appeal or otherwise, we have a long period of uncertainty."[8]

What then is a prudent regulator to do?

Over the past two years, while utilities, consumer advocates, and environmental groups have battled in the trenches over CSAPR and other environmental issues, utility commissions have sought policy ideas that can help them cut through the fog of uncertainty and make decisions that will serve the public interest, regardless of how these issues unfold. In the wake of *Homer City*, risk-reducing options—incorporating energy efficiency and demand response, including clean distributed

generation—make as much sense today as they did before the D.C. Circuit issued its CSAPR decision. In some cases they make even more sense now.

Because the Clean Air Act's mandated updates to health-based standards have historically resulted in more stringent requirements, the prudent energy regulator will take the initiative to implement such risk mitigating solutions. Simply waiting and hoping for greater certainty from federal officials represents a course of action that appears increasingly risky. Instead, energy regulators can get ahead of the curve with the following proactive measures:

- Collaborating with environmental regulators to develop better common understanding and to coordinate approaches that achieve multiple societal objectives;
- Planning for a variety of possible regulatory futures, favoring resource plans and environmental compliance strategies that are robust enough to ensure reliable and affordable electric service over a wide range of possible scenarios;
- Updating plans frequently to account for actual or potential changes in environmental standards, regulations, and other risks;
- Initiating ahead of time the effort and investment necessary to meet more stringent requirements, rather than risk compressing those actions into a limited compliance period; and
- Perhaps most importantly, managing risk as aggressively as cost—don't ignore it.

While many parties cheered the D.C. Circuit's CSAPR decision, and many others mourned it, all should agree that its immediate effect is to perpetuate the profound regulatory uncertainty clouding the future of the electric power sector. At a time of great change in the energy industry, when substantial energy infrastructure investments are needed nationally and energy technology is a growing basis for international competitiveness, chronic regulatory uncertainty can have sclerotic economic consequences. Risk mitigation measures are, of course, simple to enumerate and much harder to implement and execute effectively. But as NARUC's simulation game demonstrates, the ability of a state to maintain reliability, mitigate costs, and meet national health-based standards might depend on it. F

Endnotes:

1. NARUC's innovative interactive workshop was led by Miles Keogh on July 25, 2012 in Portland, Ore. Mr. Keogh can be reached at mkeogh@naruc.org for additional information about the workshop or its simulation game.
2. *EME Homer City Generation, L.P. v. EPA*, No. 11-1302 at 59 (Aug. 21, 2012) *(Homer City)*.
3. CAIR was vacated and remanded to EPA by another D.C. Circuit opinion pending a rule to replace it, and it currently remains in force, *North Carolina v. EPA*, 531 F.3d 896, 906-08 (D.C Cir. 2008).
4. "Appellate Court Vacatur of Cross-State Air Rule Prompts 'Regulatory Chaos,'" *Inside EPA*, Vol. 33, No. 34, Aug. 24, 2012.
5. CSAPR, CAIR, and an earlier regulation known as the "NOx SIP Call" (1998) were each developed pursuant to authority found in section 110 of the Clean Air Act to address the migration of SO_2 and NOx across state lines. Section 110 requires state regulations that implement the Clean Air Act to contain requirements "prohibiting . . . any source . . . within the State from emitting any air pollutant in an amount which will . . . contribute significantly to nonattainment in, or interfere with maintenance by, any other state." 42 U.S.C. § 7410(a)(2)(D)(i)(I).
6. On Sept. 11, 2012, the National Parks Conservation Association, Sierra Club, and Clean Air Council brought suit against EPA in United States Court of Appeals for the Third Circuit. On the same date, GenOn Power Midwest also brought suit against EPA, and on Sept. 12, 2012, the Third Circuit consolidated the two petitions. "Environmentalists' Suit Aims To Undo State Haze Plan Reliance On CSAPR," *Inside EPA*, Sept. 27, 2012.
7. 77 Fed. Reg. 9304 (Feb 6, 2012)
8. "States Spar Over EPA 'Cooperative Federalism' Duty After CSAPR Vacatur," *Inside EPA*, Aug. 29, 2012.