



No clear path forward for energy projects

Regulatory initiatives sow uncertainty among producers.

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During the past two years, the U.S. Environmental Protection Agency has been extraordinarily active in proposing and finalizing new air quality, water and waste regulations that may have profound implications for the way the United States generates electricity. At the same time, the United States faces a significant gap between projected electricity demand and supplies.

The new regulatory environment created by the Obama administration's EPA will present significant challenges that will need to be overcome by policymakers, electric utilities and project developers.

The U.S. Energy Information Administration, part of the Department of Energy, predicts that American electricity demand will increase by 30% by 2035. Energy Information Institute, Annual Energy Outlook 2010 with Projections to 2035 65 (DOE/EIA-0382) (April 2010). With the expected retirement of 45,000 megawatts of generation capacity, the agency predicts 250,000 additional megawatts of new generation capacity will be needed by 2035. *Id.* at 65. This is the equivalent of 208 new 1,200-megawatt nuclear reactors.

Any one source of power, whether renewable or nonrenewable, cannot practically meet



this growth in power demand—all sources must be used. It would take roughly 313 average-sized new coal or natural gas plants to meet a 250,000-megawatt demand increase. If wind alone were used, nearly 1 million new turbines would have to be placed into service. To make up for the shortfall during low periods of wind production, backup power sources would also have to be constructed to meet significant shortfalls in electricity production.

Given these demand increases, it is clear why the Energy Information Administration predicts that, in order to meet the United States' overall electricity demands in 2035, there must be a diverse mix of generation

sources: 44% of energy production from coal, 21% from natural gas, 17% from renewables and 17% from nuclear.

NEW RULES

The EPA has been aggressively proposing new regulations that either directly or indirectly affect the electric-utility industry, moving at a far faster rate than did the Bush administration. The Obama EPA has also reconsidered recent Bush-era EPA rules, to make them more restrictive, and has proposed entirely new regulatory standards for the fossil fuel-based power industry.

During the past two years, the EPA has proposed or finalized 29 new major regulations and has issued 127 significant policy rules. "The EPA Permitorium: The Agency's Regulatory Onslaught Stopped New Power Generation," Editorial, *Wall St. J.*, Nov. 22, 2010, at <http://online.wsj.com/article/SB10001424052748704658204575610924168519824.html>. This includes the unprecedented action of tightening all existing national ambient air-quality standards, which apply to conventional pollutants—ozone-forming constituents, particulate matter and sulfur dioxide. This number does not include the numerous disapprovals and, in the case of Texas, federal takeover of Clean Air Act state implementation plans.

Although any new regulation will cause uncertainty, two factors cause the present reg-

ulatory environment to be particularly fraught from an energy policy perspective: First, the number and breadth of new regulations is causing the kind of regulatory uncertainty that stifles energy development because the moving regulatory target means control costs and fuel prices are in a constant state of flux. Second, the EPA is pursuing regulatory proposals that so restrict existing energy production, whether it be coal-fired power plants or shale gas production, that there is no clear path forward to follow when it comes to pursuing near-term energy projects.

Although there are several examples of industries being prevented from making strategic planning decisions, the electric-utility industry is particularly handcuffed, as it has never before been faced with so many different, and often overlapping, regulatory proposals.

The 111th Congress ultimately failed to pass any legislation regulating greenhouse gases, but the EPA is moving forward with regulations under the Clean Air Act. New fossil-fuel power plants will be required to install the best available control technology to control greenhouse gas emissions.

Although the EPA has issued guidance regarding the application of these control-technology requirements to greenhouse gases, significant uncertainty remains regarding precisely what these requirements will mean for power plants and other sources and how the requirement will interact with other control-technology requirements during permitting. The agency may only require efficiency improvements now, but as the definition of best available control technology tightens over time, it is possible to predict that carbon capture and storage will eventually be required.

The EPA also recently entered into a consent decree with several states and environmental nongovernmental organizations setting forth a time line by which the EPA must finalize new source performance standards and emissions guidelines for existing sources that address greenhouse gas emissions from power plants and refineries. Under the consent decree, the EPA would be required to finalize the new standards by May 26, 2012, for power plants and Nov. 12, 2012, for refineries.

It remains unclear what these standards will contain, and the regulatory overhang of these standards will likely chill development of additional coal-fired power plants in the intermediate term. Because of the potential upward pressure these proposals could place on the demand for natural gas, fuel price volatility fears and concerns about environmental issues associated with shale gas production could continue to impede the development of natural gas-fired power plant projects, which have been very difficult to finance in recent years.

National ambient air-quality standards are limits proposed by the EPA for the six conventional air pollutants, known as "criteria"

pollutants. The Clean Air Act states that these standards should be reviewed every five years, but until this presidency, many had not been reviewed for much longer. For instance, the standard for sulfur dioxide was originally established in 1971, reviewed in 1996 (without modification), and finally lowered in June 2010. A new lower standard for nitrogen oxide—which had been reviewed twice since 1971 but never lowered—was finalized in February 2010. Two other standards for particulate matter and carbon monoxide will be proposed in early 2011.

The most commonly known standards are for ozone. Although lowered in March 2008, during the Bush administration, they were reconsidered under the Obama administration, with new limits proposed in January 2010, to be finalized very early in 2011. Under the new limits, between 76% and 96% of monitored counties would be designated "nonattainment," meaning the air quality in those counties exceeds the standards.

This designation will mean additional air permitting restrictions in those areas, including more stringent permitting for sources of ozone-forming pollutants. These requirements most significantly affect large sources, such as fossil-fuel power plants, refineries, chemical plants and large manufacturing facilities.

Separate from the above standards, the EPA will also propose new National Emission Standards for Hazardous Air Pollutants for coal- and oil-fired electric generating units by March, to be finalized by November. Directed primarily at reducing mercury, these standards are proposed as a replacement to the more flexible Bush administration's Clean Air Mercury Rule, which was vacated by the U.S. Court of Appeals for the D.C. Circuit in 2008. These rules will require further controls to be installed on oil, petroleum coke and coal-fired power plants.

The EPA is set to revise and update New Source Performance Standards for electric generating units by 2012. These new rules will set minimum standards for emissions of ozone-forming pollutants, particulate matter, sulfur dioxide and other conventional pollutants. These standards will require additional control technology and may increase the cost of developing new power projects.

Last July, the EPA proposed the Clean Air Transport Rule, the Obama administration's replacement for the Bush administration's Clean Air Interstate Rule, which was remanded to the EPA by the D.C. Circuit. The transport rule will be less flexible than the Bush administration rule, particularly because less interstate trading of emissions allowances is permitted. When finalized, the transport rule will affect the ability of power plants to utilize fossil fuels with high sulfur content.

The EPA has proposed two alternative proposals to regulate the disposal of coal-combustion residuals. Also known as "coal ash"

or "coal-combustion products," these residuals are the remaining products created from the combustion of coal. Although the EPA made two regulatory determinations and a report to Congress in 1993, 1999 and 2000 that hazardous-waste regulations were unnecessary, the EPA's leading proposal is to regulate these residuals as hazardous waste—the other proposal is to regulate them as nonhazardous waste. Hazardous-waste regulations, if proposed, would be far more restrictive and costly, again jeopardizing a significant number of existing coal-fired power plants and significantly increasing the regulatory burdens on much needed new plants.

Beyond air regulations, EPA also intends by 2012 to propose limitations on the amount of pollutants that may be discharged into water by power plants. These effluent limitations (cooling water intake structure provisions of the Clean Water Act 316(b)) will affect all power plants, creating additional uncertainty and compliance burdens.

REVERSALS OF STATE DECISIONS

In addition to completely redefining the regulatory environment, the EPA has intensified its oversight of existing regulations for all aspects of industry. The EPA has used its federal operating permit review authority, intended by the Clean Air Act only to be a procedural review, to overrule state substantive decisions for permitting industrial sources. It has overruled air-regulation plans submitted by the states, particularly from Texas, that have historically been readily approved. Beyond air issues, the EPA has announced its intention to step up Clean Water Act enforcement across the entire country, with the EPA increasing its oversight of state programs overseeing water pollution.

The stability and growth of the American economy depends on affordable, reliable and plentiful electricity. In order to maintain this stability and growth, a significant expansion of the country's electric-generation capacity will be required in the next 20 to 25 years. In order to develop this generation capacity and maintain the diverse generation portfolio that provides for stable electricity markets, significant regulatory obstacles will need to be overcome. The new regulatory environment for power generation will create challenges for utilities, project developers, investors, policy-makers and ratepayers.

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