Texas Two-Step: EPA's Greenhouse Gas Permitting Takeover

Jonathan A. Lesser

On December 23, 2010, the US Environmental Protection Agency (EPA) announced it was taking over Texas's Clean Air Act permitting process, which was met with that state's immediately suing the agency and questioning its legal jurisdiction. This is but the latest salvo in a long-running battle between Texas and the EPA.

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The genesis of the dispute stems from regulations under the Clean Air Act (CAA), which requires that all states have implementation plans (SIPs) spelling out how each will comply with Clean Air Act requirements. The dispute hinges on regulation of greenhouse gases (GHGs), which the EPA was granted authority to regulate by the US Supreme Court in its 2007 decision in *Massachusetts* v. *EPA*,[1] and the EPA's subsequent "endangerment finding" (i.e., that GHG emissions constituted a hazard to "public health and welfare") in December 2009. Under Section 110 of the CAA, states are typically granted up to three years to develop SIPs in response to changes in CAA regulations, although the language in the CAA states that the three-year time frame can be reduced at the EPA's discretion.[2]

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EPA SHORT-CIRCUITS WAITING PERIOD FOR TEXAS

Rather than waiting the typical three years for GHG regulation, the EPA informed Texas and a number of other states that the EPA was shortening the time period for SIP development to address greenhouse gas emissions. Although the state filed a motion to stay the EPA's takeover, that motion was struck down by the US Court of Appeals for the District of Columbia Circuit in a January 12, 2011, order. The ruling clears the way for the EPA to issue construction permits to major sources of GHG emissions, especially coal-fired power plants and oil refineries, and to consider best available control technology (BACT) for reducing GHG emissions when owners or investors build a plant or modify an existing one.

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The legality of the EPA's takeover, including whether it usurps states' rights and whether it can

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legally regulate GHG emissions, or whether the EPA's actions will cause Texas to secede from the United States, is a debate I leave to others. But what are the economic implications, especially for the electric power industry?

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BIG BROTHER THREATENS TO COMMAND AND CONTROL

The EPA's ability to impose "command-and-control" regulation of greenhouse gases is anathema to the market-based approaches that have been used successfully in the past for other CAA criteria pollutants, such as sulfur dioxide and nitrogen oxides. (Regulation of those pollutants is also taking a more command-and-control turn under the EPA's new Air Transport Rule [ATR].)[3] However, unlike other criteria pollutants regulated by the EPA, there is no BACT for carbon emissions,[4] which would require carbon capture and sequestration. Although a few demonstration projects exist, the technical and economic feasibility of large-scale carbon capture has yet to be demonstrated. Thus, given current technology, the only practical way to limit carbon emissions under a command-and-control regime is to restrict output from existing sources and prevent construction and operation of new sources. And that is the heart of the economic issue.

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According to data published by the US Energy Information Administration, Texas currently has 23 major oil refineries, with an overall production capacity of over 4.7 million barrels a day.[5] That represents over 25 percent of the country's entire refining capacity. In 2009, the state's coal-fired power plants generated over 278 terawatt-hours of electricity, more than any other state, and approximately 8 percent of the coal-fired power generation in the United States as a whole. That coal-fired generation accounted for 35 percent of total generation in the state. By comparison, even though Texas has the greatest installed capacity of wind power, which provided over 27 percent of all wind generation in the country, wind generation accounted for just 5 percent of the state's total electric generation.[6]

Given the significant role played by refineries and coal-fired power plants in the state, and in the United States as a whole, it is not surprising that Texas is concerned about the economic impacts of an EPA takeover of the state's greenhouse gas regulations and air permitting, and likely use of BACT as a "blunt-instrument" regulatory tool.

EFFECTS FAR BEYOND TEXAS

In December 2010, the EPA entered into settlement agreements with a number of states regarding deadlines for submitting specific regulations covering power-plant emissions and emissions from oil refineries.[7] The agreements promise that the EPA will release GHG regulations for public comment later this year (by July 26 for power plants and December 1 for oil refineries), and finalize those regulations by 11 months after they are issued. Thus, the EPA promises to issue its GHG rules for power plants in the middle of the 2012 presidential election campaign and, for refineries, the week after elections.[8]

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Of the 11 states signing the refinery agreement, only 3—California, New Mexico, and Washington—have any refining capacity, and together account for only 16 percent of total US refining capacity.[9] Similarly, although 8 of the 10 state signatories to the power-plant agreement have some coal-fired generation, in total the plants in those states generated less than 6 percent of US coal-fired electricity in 2009 and only three-fourths as much as Texas alone.

Thus, a looming economic problem for the state, and elsewhere, is that, even if one accepts that

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the EPA has the authority to regulate greenhouse gas emissions under the CAA, how the agency will implement those regulations is unknown. Such uncertainty, as is evident in other parts of the economy, cripples investment, because firms, and their investors, simply do not know what rules they will be operating under. Moreover, the impacts of that uncertainty extend far beyond the owners of refineries and coal-fired power plants; it ripples through the entire energy sector and beyond.

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Although some in the environmental community are celebrating Texas's recent loss before the US court of appeals, their celebrations may be premature. Because the GHG rules will not be known for months, little, if any fossil-fuel-generating investments are likely to be made. However, those investment decisions, and the final GHG rules the EPA issues, also introduce tremendous uncertainty for renewable energy developers, because the economic viability of renewable energy generation hinges, in large measure, on the market price of electricity.

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Without GHG regulations and unless the EPA effectively shuts down shale gas exploration and development, which is providing rapidly growing supplies of natural gas, market prices for electricity will likely remain low. Low prices will hamper the ability of renewable energy developers to secure financing and lucrative mandated purchase agreements, such as the agreement between Cape Wind and National Grid that was approved in December 2010 by the Massachusetts Department of Public Utilities, with electric utilities.

Command-and-control regulation has always been the bluntest of environmental regulatory policies because, relative to market solutions (e.g., emissions taxes or cap-and-trade agreements), it is far more costly for the results achieved. Of course, there are cases where market instruments simply don't work, such as pollutants that are dispersed locally. With GHG emissions, the situation is completely reversed, with market solutions, especially a broad-based emissions tax, serving as the most efficient approach to regulating GHG emissions.

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Thus, as the EPA steadily moves forward along a brute-force regulatory front, Texas will likely continue to fight to maintain its economic vitality. How this two-step ultimately will be resolved is unlikely to be known for several years.

NOTES

1. 549 U.S. 497 (2007).
2. 42 U.S.C. § 7410(a)(1). "Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within 3 years (or such shorter period as the Administrator may prescribe)."
3. Ironically, under the ATR, the EPA is likely to impose BACT regulations that reduce power-plant operating efficiency, thus exacerbating carbon emissions per megawatt-hour generated. Thus, by complying with the ATR, coal-fired power-plant operators are likely to find themselves subject to more stringent carbon-reduction requirements.
4. The EPA's endangerment finding applies to other greenhouse gases besides carbon dioxide. They also include methane, nitrous oxide (the "laughing gas" your dentist uses), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
5. Data available at http://www.eia.doe.gov/oil_gas/petroleum/data_publications/refinery_capacity_data/refcapacity.html.
6. In the United States as a whole, wind-generated electricity accounted for less than 2 percent of total electric generation in 2009.
7. Ten states, plus the District of Columbia, the city of New York, and three environmental groups, signed the power-plant agreement. The same states, plus New Hampshire, signed the refinery agreement. The complete settlement agreement for power plants can be downloaded from http://www.epa.gov/airquality/pdfs/boilerghgsettlement.pdf. The agreement for refineries can be downloaded from http://www.epa.gov/airquality/pdfs/refinery-ghgsettlement.pdf.
8. The agreements also allow the EPA to modify whatever rules it develops and the settling parties to sue the EPA.
9. The three states' refining capacity is just over half that of Texas alone.

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