New Source Performance Standards for Global Greenhouse Gas Emissions From the Power and Refining Sectors: Wrong Mechanism at the Wrong Time

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For those interested in the intersection of global greenhouse gas (GHG) regulation and responsible energy policy, December 23, 2010, was a day worth remembering. Over at the U.S. Environmental Protection Agency (EPA), regulators were announcing a schedule for rulemaking for new source performance standards (NSPS)[1] for GHG emissions from refineries and power plants. Meanwhile, the *Wall Street Journal*[2] ran a lead editorial reflecting upon an apparent division in the ranks among power companies. Reasoned the *Journal*, those without appreciable amounts of coal-fired generation were favorably disposed to potential EPA regulation of GHGs because it simply allowed them to charge more by increasing the clearing price for energy. These two developments in many ways frame the debate over NSPS. EPA proposes regulation, and self-interested sources agree, thereby reinforcing economic claims made by the Agency in defense of its decision.

On December 23, EPA essentially proposed a timetable for adopting NSPS from the two key energy sectors: electric power production and petroleum refining. Shortly thereafter on January 2, permitting requirements under the new source review program would become final as well under the terms dictated by the so-called Tailoring Rule[3]—a rule designed to delay regulation for new sources depending on the tons per year emitted by those sources. Leaving aside the potential legal infirmities of the Tailoring Rule, the NSPS announcement may be more interesting, if for no other reason than the NSPS program addresses modified and new sources (as its name implies) as well as existing sources through the adoption of emissions guidelines.

If the process that births the final NSPS rules is supposed to be open and robust, the process by which the time lines were announced was not. Rather, it was determined by settlement agreements with activist states and with environmental organizations. The reason this is troubling is that the long history of EPA time lines can break down under the weight of technological and economic realities. Of course, the art of the possible is best learned from those who actually operate and employ the complex machinery of these sectors. Unfortunately, the settlement agreement process allows for no input from these sources. So, we are left with aggressive time lines—proposals for power plants and refineries due by July 26, 2011, and December 10, 2011, respectively, and final rules by May 26, 2012, and November 10, 2012, respectively. And we have little confidence as to whether these dates make sense when real-world assumptions are taken into account. Even supporters of climate change legislation have expressed real concern about the lack of time EPA has given itself to develop the proposal and to consider all of the options and their impacts. In particular, EPA has not allowed itself time to collaborate with stakeholders in the regulated community and within state and federal agencies that may hold views that differ from its own.

Essentially, the world of the NSPS program requires the Agency to set specific standards on an industry-by-industry basis. While EPA sets standards directly for modified and new facilities, the Agency is supposed to work in coordination with the states on emissions guidelines for existing facilities. While guidelines sound like mere suggestions, the reality is that they become enforceable performance standards within the jurisdiction of the states. EPA has assured the regulated community that the

1. U.S. EPA, Fact Sheet—Settlement Agreements to Address Greenhouse Gas Emissions From Electric Generating Units and Refineries, Dec. 23, 2010, *available at* http://www.epa.gov/airquality/pdfs/settlementfactsheet.pdf.
2. Editorial, *The EPA's Utility Men*, Wall St. J., Dec. 23, 2010.
3. U.S. EPA, Fact Sheet—Proposed Rule: Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule (Nov. 10, 2010), *available at* http://www.epa.gov/nsr/fs20090930action.html.

timetables for rulemaking are the beginning of the process and that the NSPS program itself allows for appropriate flexibility when it comes to the promulgation of ultimate timetables and targets.

Sources of potential flexibility in the context of NSPS include the standard of best-demonstrated technology, which is generally understood to take into account compliance costs. In documents accompanying the NSPS settlements in December, the Agency further committed to some form of coordinated approach that would take into account the multiple and overlapping regulatory developments likely to face the power sector. This intent to coordinate appears fully consistent with recent executive branch pronouncements on regulatory policy. President Barack Obama himself embraced the need to closely scrutinize the cost and economic impact of new agency regulations. His January 18 Executive Order laid out the new review process for regulations, stating that an Agency should "tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations."[4] The accompanying memo issued with the Executive Order sought to clarify the order, by highlighting a basic tenet of the Executive Order: agencies must "consider costs and how best to reduce burdens for American businesses and consumers." It is imperative that EPA honor the spirit of the president's position and address the time frame and content of overlapping rules.

I. Electric Power Sector

Just as the power sector is supposed to address GHG rules, EPA is determined to promulgate numerous other rules for conventional emissions with compliance deadlines at or near 2015. In 2015, due to the timetables established by EPA, the industry will face perhaps its costliest and most pressing challenge—a maximum achievable control technology standard for electric generating units (Utility MACT). Other rules include the potential listing of coal-combustion residuals as hazardous waste under the Resource Conservation and Recovery Act,[5] national ambient air quality standards for sulfur dioxide, oxides of nitrogen, ozone, and particulate matter, transport rules, cooling water intake structure requirements, and new effluent discharge limits. Taken together, these regulations have been called a train wreck, a tsunami, a blizzard, and other colorful metaphors. But one thing is for sure: these rules are complex, expensive, and overlapping in ways the presidential Executive Order seems to eschew.

The NSPS and Utility MACT, coupled with the other rules, will impact roughly 400,000 megawatts of oil and coal-fired generation. That accounts for approximately 40% of current available capacity and almost 50% of total U.S. electric generation. The Utility MACT rule will become effective in early 2012, with compliance expected three years later, by which time NSPS will have been final for almost three years. The truncated compliance schedule for Utility MACT is, you guessed it, the direct result of yet another settlement agreement. Most experts agree that, based upon historical performance, it will be exceedingly difficult for the power sector to come to grips with all these overlapping rules without some substantial sacrifice to electric reliability. Permitting, engineering, construction, and procurement of controls all impose their own unique constraints.

It is difficult to say exactly what the economic impact of NSPS, other GHG constraints, and the controls on conventional pollutants will be for the power sector specifically or for the U.S. economy as a whole. EPA has not traditionally done any form of economic analysis to determine the cumulative impact of multiple and overlapping regulations. That said, as a frame of reference, consider the contribution likely to be made by the affected part of the power sector if allowed to continue and to innovate. Adam Rose and Dan Wei of Pennsylvania State University set out to estimate the total economic footprint of coal-fueled electric generation by 2015.[6] They found that coal-fueled generation will contribute

- $1.05 trillion (2005 $) in gross economic output;
- $362 billion in annual household incomes; and
- 6.8 million jobs.[7]

To break it down further, IHS/Global Insight estimates that every $1 billion spent on upgrade and compliance costs will put 16,000 jobs at risk and reduce U.S. gross domestic product (GDP) by as much as $1.2 billion.[8]

Some commentators have suggested that all the potential threats to reliability and the economy are overblown in light of the industry's past record of compliance with standards without real threat to operations. While it is true that the power sector has reduced conventional emissions by some 60% over the last few decades, the last significant wave of environmental legislation afforded the industry 10

4. Exec. Order No. 13653, 76 Fed. Reg. 3821 (Jan. 21, 2011).
5. 42 U.S.C. §§6901-6992k, ELR Stat. RCRA §§1001-11011.
6. Adam Z. Rose & Dan Wei, The Economics of Coal Utilization and Displacement in the Continental United States, 2015 (July 2006), *available at* http://www.coalcandothat.com/images/content/PennState2006UpdateFinal072506.pdf.
7. *Id.* at 4.
8. IHS/Global Insight, The Economic Impact of Proposed EPA Boiler/Process Heater MACT Rule on Industrial, Commercial, and Institutional Boiler and Process Heater Operators, Report to the Council of Industrial Boiler Owners (Aug. 2010), *available at* http://www.cibo.org/pubs/boilermact_jobsstudy.pdf.

years to indentify cost-effective solutions and installation schedules. The train wreck of overlapping regulations, by contrast, proposes compliance deadlines as early as 2014 and concluding by 2018—far less time than originally contemplated under the Clean Air Act (CAA).[9] To say that industry has known or should have planned for these regulations belies the fact that the current proposals were only developed over the past two years. Any tools at industry's disposal are severely limited by time, multiple demands on limited resources, inadequate funding, transmission planning, reconfiguration needs, and the like.

II. Refining Sector

Much of what has been observed regarding the failure of the Agency to assess multiple regulations affecting the power sector can likewise be said of the refining sector. But refiners face one important additional problem related to stationary source controls on GHGs: the international marketplace for motor fuels.

The modern refining industry exists in an internationally competitive marketplace. Refined product can just as easily be exported to the United States as can crude petroleum. If GHG regulations are imposed on domestic refiners and such limits are not imposed on foreign refiners—a highly likely outcome—then domestic refining will wither on the vine as imported gasoline becomes more commonplace. Such a result will place U.S. consumers at the mercy of foreign sources of supply and will greatly complicate U.S. national security interests in ways that even crude oil imports do not. The fact is that the U.S. armed forces run on gasoline, diesel, and jet fuel. If the U.S. domestic refining base collapses, our military will increasingly depend on foreign sources to mobilize.

Sen. Sherrod Brown (D-Ohio) has been a leading advocate on behalf of energy-intensive manufacturing industries, a description that surely applies to refining. In a February 28, 2010, letter to President Obama, Senator Brown noted that, "any approach to reducing greenhouse gas emissions must recognize the unique situation of energy-intensive industries competing in a global market. Due to the nature of these businesses, there is already limited ability to raise prices due to increased energy costs in the global marketplace."[10] Of course, EPA, through its rulemaking process, can do little if anything to address this leakage problem. As Senator Brown observed: "EPA has neither a plan in place nor the authority to provide these protections to U.S. manufacturing, a sector of the economy critical to the continued economic recovery of my state and so many others."

Industries sources have estimated that as much as 70% of gasoline and diesel fuel could end up being imported from refineries in Africa, China, India, the Middle East, and South America by 2025 if the United States imposes inflexible unilateral GHG controls, at a cost of hundreds of thousands of jobs.[11]

In addition, to the extent concern is raised about GHG emissions from the transportation sector, we would do well to remember that most carbon in the refining process passes through to the motor fuel itself. At that point, the U.S. Congress has already determined an appropriate mechanism to regulate it quite apart from any NSPS, namely, through fuel economy standards for trucks and automobiles.

III. Benefits?

Allegations regarding the benefits of strong NSPS programs include environmental and economic considerations. As a general rule, the environmental benefits of NSPS programs for GHG emissions from the power and refining sectors assume actual reductions in global warming. And yet, proof of such reductions is exceedingly hard to come by. The problem presented by the greenhouse effect is nothing if not international in nature. EPA regulations, unfortunately, are not. Ted Nordhaus and Michael Shellenberger wrote that the consequences of global warming will continue "even if we stop emitting all greenhouse gases tomorrow."[12] Even the president's current "regulatory czar" described the effect of U.S. implementation of the Kyoto Protocol as "meager . . . in reducing anticipated warming."[13]

Some have argued that the United States must lead by example, potentially drawing recalcitrant nations along in its wake. While this outcome is possible, so is its opposite. Unions for Jobs and the Environment, a group of 10 major U.S. labor organizations and a nongovernmental observer accredited by the United Nations Framework Convention on Climate Change, has argued that if environmental advocates "were to succeed in . . . forc[ing] unilateral reductions in the US, without regard to foreign policy, the US would lose an important source of foreign policy leverage; namely, the ability to insist on commitments by other nations as a precondition for its own GHG reductions."[14]

Indeed, in the case of energy-intensive products like refined petroleum or other products that depend on affordable and reliable electric power, it is possible that poorly calibrated GHG emission standards could simply result in more goods being imported from countries with no controls and often less efficient manufacturing processes. Ironically, if standards result in this outcome, GHGs will

9. 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.
10. Letter from Sherrod Brown, U.S. Senator, to President Barack Obama, (Feb. 28, 2010), *available at* http://brown.senate.gov/imo/media/doc/EP-Aletter1.pdf.
11. Letter from Charles T. Drevna, President, National Petrochemicals & Refiners Association, to Hon. Gina McCarthy, Assistant Administrator, Air and Radiation, U.S. EPA (Mar. 4, 2011), *available at* http://www.npra.org/cmsRelatedFiles/NPRA_Letter_to_EPA_re_NSPS_03_03_11_final.pdf.
12. Ted Nordhaus & Michael Shellenberger, Break Through: From the Death of Environmentalism to the Politics of Possibility 31-40 (Houghton Mifflin 2007).
13. Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 Harv. Envtl. L. Rev. 1, 44-46 (2007).
14. Unions for Jobs and the Environment, Amicus Brief at 26, Massachusetts v. Envtl. Prot. Agency, 127 S. Ct. 1438, 37 ELR 20075 (2007).

increase per unit of manufacturing and as a result of fuel used in transporting goods back to the United States.

Some have claimed that regulations will stimulate new investment in technology of various descriptions, creating so-called green jobs. While this may be true, heavy regulatory burdens have never been truly conducive to business confidence, investment, and job creation. Data have shown that salaries paid for jobs classifiable as "green" are far below the national average. European experience demonstrated that for every four green jobs created, nine higher paying industrial jobs are lost.[15] At the very least, flimsy or overly optimistic economic benefit analysis can not be the basis for risking millions of industrial jobs and billions of dollars in GDP. David Montgomery of Charles River Associates, a noted economist with 40 years of work in energy and environmental policy, recently testified:

> The serious debate in environmental policy is about how the costs of new regulations compare to their benefits, and how to design the regulations to minimize cost, uncertainty and disruption. Claims that regulations that raise the cost of doing business will create new jobs are, at best, a sideshow. Such claims only distract attention from the difficult tradeoffs that must be made between costs and benefits. "Green jobs" is not a subject that leading economists have usually taken seriously enough to criticize in professional journals.[16]

As most economists agree, a policy of "regulating ourselves to prosperity" seems suspect at best.

IV. Solutions

Over the last three years, many companies in the power and refining sectors worked to suggest viable alternatives for climate legislation in order to protect customers and to lower risks for shareholders. The consensus of participants in both sectors is that climate change policy should be addressed by Congress, and not by EPA. Congress would seem to be in the best position to create reasonable long-term goals that match the long-term investment horizon necessitated by both industries. Only Congress can provide for the flexible mechanisms that allow the power and refining sectors to protect their customers without putting a drag on the economy. So, both sectors continue to believe that this topic should be addressed with legislation, not regulations.

The simplest way to address the problems presented by EPA regulatory authority for GHGs is for Congress to pass legislation to preempt the application of such authority until and unless Congress firmly establishes the basis for such regulation in the future. Chairman Fred Upton (R-Mich.) of the U.S. House of Representatives Energy and Commerce Committee and Sen. Jim Inhofe (R-Okla.), ranking member of the U.S. Senate Committee on Environment and Public Works, recently introduced legislation that would do just that in simple and unambiguous terms.

Bills that place arbitrary time limits on congressional deliberations—as opposed to those that address EPA authority forthrightly and directly—seem less optimal. Delay bills do not address the concern over EPA permitting. Historically, EPA has been very capable of delaying permit action for a period of years. Delay bills could simply cause EPA to delay its action on pending or future permit requests in order to allow a delay period to elapse. By contrast, preemption language sends a clearer and unmistakable signal to the Agency that they are not to condition permits, state implementation plans, and other government actions on climate change concerns. It has the virtue of being far more specific than the delay bills that have been proposed. By so doing, preemption better conforms to energy planning. Utilities and refiners should not be forced to reevaluate planning on an annual or near-annual basis. Changing the underlying authority forms a clearer basis for evaluating investment options.

Such a policy of preempting regulatory authority should not be read to reject any government efforts in the area, but rather would place resources under existing authority where they can produce tangible results: energy efficiency information and regulation; tax incentives; loan guarantees; basic research through the national laboratory system; other elements of a no-regrets climate policy; and, most of all, continued international engagement. Regulatory limits on GHGs, by contrast, require authorization from Congress. Such authorization is called for, given that the underlying statute does not directly confer the authority on the Agency and that unilateral regulation can be a bet-the-economy proposition with dubious benefits. As the *Christian Science Monitor* editorialized on the eve of the president's trip to Copenhagen:

> Climate change is too important to be left solely to a Washington bureaucracy. And as a political move to pressure Congress, Obama's move [to regulate GHGs] will likely just backfire. As he has lately started to do with healthcare, Obama needs to spend more time up on Capitol Hill to get the bill he wants. Trying to distort the American system of governance . . . will only heat up, not cool down, the rancor over passing a climate-change law.[17]

15. Editorial, *How Green Is Your Lost Job?*, Investor's Bus. Daily, Mar. 1, 2011 (citing green jobs data from Denmark, Germany, Scotland and Spain), *available at* http://www.investors.com/NewsAndAnalysis/Article/564579/201103011820/How-Green-Is-Your-Lost-Job-.aspx.

16. *Green Jobs and Trade: Hearing Before the S. Comm. on Environment and Public Works, Subcomm. on Green Jobs and the New Economy* (Feb. 15, 2011).

17. Editorial, *Copenhagen, EPA, and Climate Change: Obama's False Move*, Christian Sci. Monitor, Dec. 8, 2009.