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## Potential Implications Of CAA Carbon Constraints

*Law360, New York (June 23, 2009)* -- On April 17, 2009, the U.S. Environmental Protection Agency (EPA) issued its much-anticipated proposed finding that emissions of greenhouse gases (GHGs) are contributing to air pollution that may reasonably be anticipated to endanger public health and welfare.

When finalized, this “endangerment finding” will obligate the agency to regulate GHG emissions from new motor vehicles.

More broadly, however, an endangerment finding signals an inexorable move toward regulating GHG emissions from a wide range of stationary and mobile sources, from construction equipment to coal-fired power plants, metal processors, and chemical manufacturers, just to name a few.

EPA’s decision thus marks a watershed toward a carbon-constrained future for major sectors of the U.S. economy, either under the Clean Air Act (“CAA”) or as a catalyst for Congress to enact climate change legislation.

While many of the resulting legal obligations for regulated entities will arise from future regulations promulgated by EPA and case-by-case permitting decisions, rather than the endangerment finding itself, the proposed rule sheds light on the potential scope of subsequent regulations.

It also raises the very real question of whether, in the face of complex GHG regulation under the CAA, affected parties may prefer GHG emissions to be addressed through comprehensive federal climate change legislation.

### **Background**

EPA’s proposed rulemaking is a direct response to the U.S. Supreme Court’s landmark 2007 decision in *Massachusetts v. EPA*,<sup>[1]</sup> which held that GHG emissions are air pollutants under the CAA and, therefore, that EPA would be obligated to regulate GHG

emissions from new motor vehicles under the statute in the presence of a positive endangerment finding.

As a consequence of its decision, the Supreme Court remanded to EPA the rulemaking petition at issue, which was submitted to EPA in 1999 by 19 organizations seeking motor vehicle emissions limitations.

EPA responded by preparing a proposal to issue a positive endangerment finding for GHG emissions from vehicles, which the agency submitted to the White House Office of Management & Budget.

EPA withdrew the proposal after Congress passed the Energy Independence & Security Act, however, and, instead, issued an Advanced Notice of Proposed Rulemaking (ANPR) in July 2008.

The ANPR made no proposal regarding an endangerment finding for, or regulation of, GHG emissions; rather, it outlined the possible regulatory impacts of making an endangerment finding, focusing in particular on the various CAA programs that could come to apply to GHG emissions.

Then-EPA Administrator Stephen Johnson described the CAA as “outdated law originally enacted to control regional pollutants that cause direct health effects [and] ill-suited for the task of” GHG regulation.[2]

After the issuance of the ANPR, the EPA took no further visible action in response to *Massachusetts v. EPA*, leaving the issue in the hands of the next administration.

President Obama has made clear his commitment to regulating GHG emissions, and his administration has let it be known that, in the absence of Congressional action (whether through additions and/or amendments to the CAA itself or stand-alone legislation), it would be willing to regulate GHG emissions using existing statutory authorities, including the CAA as it stands today.

## **EPA’s Proposed Findings**

Section 202(a) of the CAA, the provision at issue in *Massachusetts v. EPA*, obligates EPA to regulate “the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in [the Administrator’s] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health and welfare.”

Unpacking that provision, EPA’s proposal actually responds to its several components and not merely to the endangerment question.

First, the proposal would define “air pollutant” as the collective class of the six key GHGs: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons (HFCs),

perfluorocarbons (PFCs), and sulfur hexafluoride (the same gases identified in the United Nation Framework Convention on Climate Change), even though two of the component GHGs are not actually emitted by motor vehicles.

The proposed rule would likewise define “air pollution” as the mixture of these six GHGs in the atmosphere, a treatment allowing evaluation and regulation of GHGs on a collective “carbon dioxide equivalent” (“CO<sub>2</sub>-e”) basis.

Second, the proposed rule includes the key determination that these “air pollutants” cause or contribute to “air pollution” that may reasonably be anticipated to endanger both public health and welfare.

Among other things, EPA cites expected increases in the magnitude and duration of severe heat waves, an up-tick in the intensity of precipitation events in general and along the Gulf and Atlantic coasts in particular, and the potential health effects of such events, including increased mortality and morbidity, respiratory problems caused by heat-induced increases in regional ozone pollution, and disease and injury caused by floods, storms, droughts, and fires.

The agency also identifies anticipated significant disruption to ecological systems, biodiversity, and environmental services as threats to welfare. It even refers to climate change threats to national security.

## **CAA Regulation of GHG Emissions**

### *Vehicle Emissions*

The proposed endangerment finding is a prerequisite for regulating GHG emissions from motor vehicles. Such regulation could simply require increases in fuel economy but is more likely to also include emissions limitations.

In fact, the administration on May 19 announced that EPA and DOT will work together on a national program to combat climate change.

EPA proposes to impose GHG emissions limitations on cars and trucks under Section 202 of the CAA[3] that would require automakers to achieve, on average, an emissions standard of 250 grams/mile of CO<sub>2</sub> by model year 2016, while DOT plans to impose new fuel-efficiency standards for 2012 through 2016 under authority of its corporate average fuel economy (“CAFE”) program; such standards would require an automaker’s vehicle fleet to achieve an average fuel economy of 35.5 miles per gallon by 2016.[4]

Additional actions on EPA’s part may also include requiring reductions in the carbon content of fuels, raising questions about the effect of the low-carbon fuels called for by the CAA’s renewable fuel program[5] on the extent to which additional measures to reduce GHG emissions from vehicles may be needed.

### *Implications for Other GHG Sources and Emitting Activities*

More broadly, the proposed finding lays the groundwork for CAA regulations directly affecting a wide range of mobile and stationary sources and GHG-emitting activities — whether developed in response to pressure from the administration, petitions for rulemaking submitted by interested parties, or case-by-case permitting proceedings, because it is impossible to distinguish the effects of gases from such sources from those emitted by motor vehicles.

Indeed, *Massachusetts v. EPA* suggests that there may be no other acceptable basis on which to refuse to regulate.[6]

Further, as noted above, the current administration has broken from former Administrator Johnson's position that the statute should not be applied in its present form to address GHG emissions.

As a result, the full force of CAA regulation could fall on activities and sources never before regulated under the statute.

For example, non-road vehicles and transportation sources like trucks, aircraft, ocean vessels, trains, and barges could face a combination of efficiency requirements and low-carbon fuel standards similar in concept to those that may apply to motor vehicles.

The statute's heavy weight could also fall on a variety of stationary sources never before regulated and on currently regulated stationary sources in new and challenging ways.

EPA's July 2008 ANPR contained a detailed analysis of how the numerous existing CAA programs could be applied to address GHG emissions under the statute in its present form; here, as an example of the great complexity application of the CAA in its current form to GHG emissions could impart, we focus on potential application of New Source Performance Standards (NSPS) and Prevention of Significant Deterioration (PSD) preconstruction requirements to stationary sources. Many of the complexities identified would apply equally with regard to application of other CAA programs.

#### *New Source Performance Standards (NSPS)*

The CAA's NSPS provisions generally obligate EPA to establish "standards of performance" for new or modified stationary sources that "cause or contribute to" endangerment.

Standards of performance are emission standards reflecting "the emission limitation achievable through the application of the best [adequately demonstrated] system of emission reduction (taking into account the cost of achieving such reduction)."[7]

Thus, each new or modified stationary source within a category that EPA finds “causes or contributes” to endangerment would be required to meet minimum GHG emission performance standards.

As a preliminary matter, the process for establishing the GHG performance standards themselves would likely prove extremely complicated and time-consuming.

EPA would first have to identify source categories, which can be remarkably specific.[8] Then, EPA would be obligated to engage in notice and comment rulemaking for every category and its parameters.

Finally, EPA could then determine what standards should apply to each category (again through notice and comment rulemaking).

Further, while the agency would likely be focused on “key” source categories as a practical matter, creating any regulatory threshold for source categories may prove difficult.

This is because EPA’s proposal would deem the combination of the six key GHGs as contributing to air pollution that may reasonably be anticipated to endanger public health and welfare; thus, setting aside issues of emissions volumes, the agency may face difficulty with any position that the GHG emissions of a university or hospital, for example, differ qualitatively from those of a utility facility in terms of their ability to cause or contribute to endangerment.

The agency has publicly maintained, however, that it has discretion to not regulate certain source categories on the ground that the emissions from those sources are de minimis and therefore do not “cause or contribute” to the endangerment.

Consequently, the NSPS may allow the agency to avoid regulating the GHG emissions of homes, schools, and hospitals, for example, on the ground that GHG emissions from these sources are de minimis.

As discussed below, the PSD preconstruction program may have even more significant impacts.

### *PSD Preconstruction Requirements*

An additional likely result of a positive endangerment finding under Section 202(a) is a listing of GHGs under CAA § 108 as emissions that “cause or contribute to air pollution” for which EPA has made an endangerment finding.

A Section 108 listing would obligate EPA to promulgate national ambient air quality standards (NAAQS) for GHGs.[9]

Generally speaking, NAAQS purport to establish, using a margin of safety, the concentration of pollutants in the atmosphere at which public health and welfare will not be threatened.[10] For particular pollutants, states or regions are classified as “attainment areas” (where NAAQS are satisfied) or “nonattainment areas” (where they are not).

Different standards apply to new and modified emitting facilities and activities in attainment and nonattainment areas, respectively: new and modified covered facilities in attainment areas are subjected to PSD preconstruction requirements, while new and modified facilities/activities in nonattainment areas are subjected to separate and even more stringent nonattainment “new source review” (NSR) provisions.

Historically, and as the program’s structure itself suggests, pollutants regulated under these provisions of the CAA have tended to be the result of local or regional emissions sources. GHGs, which are relatively evenly distributed across the U.S. and around the globe, pose a new wrinkle, and would seem to require EPA to classify the country as a whole as attainment or nonattainment.

Many believe, and EPA documents suggest, that EPA will seek to classify the entire U.S. as attainment because PSD preconstruction requirements entail lower compliance costs and simpler administration than the even more demanding nonattainment NSR program.[11]

But the potential results should make regulated entities stop and take note.

Application of the PSD preconstruction provisions, which require new or modified “major emitting facilit[ies]” to use the “best available control technology” (BACT) to control emissions of pollutants subject to regulation,[12] would capture many sources heretofore not regulated under the CAA.

Major emitting facilities include any one of a group of industrial stationary sources emitting over 100 tons per year of an air pollutant, as well as any stationary source emitting over 250 tons per year of an air pollutant.[13]

As applied to GHGs, and carbon dioxide in particular, these thresholds are very low and could implicate, for example, sources such as schools and hospitals; by comparison, EPA’s recently proposed GHG emission reporting rule generally contains a reporting threshold of 25,000 tons CO<sub>2</sub>e per year.[14]

Further, the terms of the CAA do not clearly allow the EPA to exempt certain sources from the PSD preconstruction requirements as de minimis on the basis that they do not “cause or contribute to” endangerment.

Rather, battles will likely be fought over what constitutes BACT for a given source, a complex, source-specific process that may require a source to incur substantial costs to reduce emissions.

## Debating the Prospect of Federal Legislation

One effect of EPA's proposal may be the provision of a strong incentive for Congress to legislate — and for industry to prefer legislation — on climate change in the immediate future.

Such legislation could come in a form as relatively simple as an amendment and/or addition to the CAA, or it could come in the form of a comprehensive climate change proposal, or as some mixture of the two.

At present, the American Clean Energy and Security Act of 2009 ("ACESA"), spearheaded by Reps. Waxman and Markey, is gaining significant traction in the House and would expand upon and amend significant portions of the CAA to create a separate cap-and-trade program for GHG emissions within the statute.

Importantly, it was the inclusion of compliance cost containment mechanisms in ACESA that secured its passage out of the House Energy and Commerce Committee.

In fact, every significant proposal for federal GHG emissions-limiting legislation — ACESA, the Lieberman-Warner Climate Security Act, the Boucher-Dingell Discussion Draft, and the American Clean Energy and Security Act of 2009 — has contained key features that arguably ease both compliance costs and administrative burdens for potentially affected entities.

The nationwide cap-and-trade approach would allow sources to take advantage of emission reductions made at other sources. Also, the proposed compliance thresholds have been high (annual emissions greater than either 10,000 tons or 25,000 tons CO<sub>2</sub>e).

Furthermore, these bills contain or contained mechanisms like offsets and banking to allow sources to take advantage of previously accomplished reductions, as well as the effects of activities such as agricultural soil carbon sequestration and reforestation.

The ability of the EPA to implement similar measures under the CAA in its current form is limited.

As opposed to a more flexible cap-and-trade approach, the existing CAA generally employs a command-and-control approach to regulating air pollution and does not provide for cap-and-trade for pollutants not associated with acid rain.[15]

Consequently, regulation of GHG emissions under the current CAA would likely not allow for the primary benefits a cap-and-trade program could offer: a nationally uniform scheme and flexibility.

Regardless of the terms of an EPA-established GHG regulatory program under the existing CAA, EPA does not have the authority to change the statutory terms of the CAA that generally allow states to adopt laws more stringent than the mandates of the CAA.

Thus, the prospect of state-by-state action threatens to undermine national uniformity if EPA is left to regulate GHG emissions under the current CAA.

Similarly, the terms of the CAA that require new, modified, and existing stationary sources to meet applicable NSPS, BACT, and nonattainment NSR requirements may be inconsistent with other flexible mechanisms found in cap-and-trade proposals, such as trading, offsetting, and banking.

Trading, offsetting, and banking would allow a stationary source to, in any given year, essentially use emission reductions from different sources or earlier years in order to meet the stationary source's emission reduction obligation for that year.

Trading would involve the purchase and sale of emission allowances on an open market, allowing a source to choose to either purchase the right to emit more or reduce its emissions.

Offsetting would allow a stationary source to meet its compliance obligations by essentially purchasing the right to claim the GHG emission reductions accomplished by facilities and projects that do not themselves have compliance obligations.

Lastly, banking would provide that emission allowances would never expire; thus, an emission allowance issued in 2010 could be used for compliance in, for example, 2015.

With the exception of the acid rain program (CAA Title IV), the language of the CAA does not explicitly contemplate that stationary sources may meet applicable emissions limitations — be they NSPS, BACT, or nonattainment NSR requirements — in a manner other than reducing direct emissions in real-time.

Thus, it could be argued that the CAA's NSPS, BACT, and nonattainment NSR programs require emission reducing technology to be applied at the source regardless of the cost at which emission reductions could otherwise be accomplished.

Such a position would likely be inconsistent with trading, offsetting, and banking and substantially prevent EPA from developing a regulatory program capable of delivering the flexibility of a cap-and-trade program.

But legislative proposals to date likely have not been ideal solutions either. To begin with, legislative proposals have been ambitious, and not necessarily from a GHG emission reduction standpoint.

All of the relevant legislative proposals would have been administered by EPA and would have required a potentially unprecedented number of rulemakings.

For example, the Lieberman-Warner Climate Security Act would have required more than thirty discrete rulemakings, most of which would have been required within two years of the bill's passage.

And as legislative proposals have evolved, legislators seem more interested in applying parts of the CAA to GHG emissions even though they don't have to.

In particular, the Boucher-Dingell Discussion Draft and the Investing in Climate Action and Protection Act called for EPA to promulgate and require NSPS for a wide variety of sources, and the current draft of the American Clean Energy and Security Act of 2009 would require NSPS for stationary sources not subject to the bill's cap-and-trade provisions under certain circumstances.[16]

In addition to dramatically increasing the amount of rulemaking called for by the legislation, overlaying the cap-and-trade program with command-and-control emission reduction requirements could substantially lessen the flexibility offered by the cap-and-trade program.

## **Moving Forward**

EPA's actions portend a dramatic shift in the regulatory scheme applicable to industrial facilities and companies already subject to CAA compliance obligations, as well as a large number of facilities, companies, and activities not currently regulated under the CAA.

Potentially affected entities should carefully evaluate likely impacts of regulation under the existing statute as well as proposed comprehensive climate change legislation under the CAA or otherwise.

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[1] 549 U.S. 497 (2007).

[2] In addition, Administrator Johnson issued a Memorandum on December 18, 2008 interpreting the definition of pollutants subject to the CAA's Prevention of Significant Deterioration (PSD) program as excluding, among other substances, carbon dioxide. Notably, the agency granted a petition for reconsideration of that interpretation in February 2009, stating that PSD permitting authorities "should not assume that the

memorandum is the final word on the appropriate interpretation of Clean Air Act requirements.”

[3] The Notice of Upcoming Joint Rulemaking issued by EPA and DOT states that the GHG emissions standards would become final only if EPA’s proposed endangerment determination becomes final.

[4] EPA and DOT believe that an emission standard of 250 grams/mile equates roughly to a 35.5 miles per gallon fuel economy standard and that, as a result, their proposed regulations will amount to a single regulatory requirement for automakers.

[5] CAA § 211.

[6] *Id.*, 127 S.Ct. at 1462.

[7] CAA § 111(a)(1).

[8] See generally 40 C.F.R. Part 60 (a nearly 900 page Part that contains NSPSs for over 70 source categories).

[9] *Id.* at § 109.

[10] *Id.*

[11] Any such decision may be subject to challenge, however, particularly in light of EPA’s technical support document to the proposed finding, which chronicles the effects of climate change already taking place.

[12] *Id.* at §§ 165, 169.

[13] CAA § 169(1).

[14] This concern may be mitigated to a limited extent because the CAA allows states to exempt nonprofit health and education institutions from the BACT requirement. *Id.*

[15] The CAA’s acid rain trading program is a notable (and successful) example.

[16] The current draft would exclude GHGs from other CAA applications; for example, it would prevent listing of GHGs as hazardous air pollutants on the basis of climate change effects.