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## ENVIRONMENTAL LAW

### EPA Proposes Mandatory Reporting of Greenhouse Gases

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*Special to the Legal*

During the recent presidential campaign, President Obama advocated passage of cap-and-trade legislation to control emission of greenhouse gases, or GHGs. As the president reiterated at a business roundtable meeting last week, the concentration of GHGs in the atmosphere has increased rapidly over the past century; this increase can be attributed primarily to human activities; and the consequences of this continuing change may become severe.

These views are consistent with good science. For example, the Intergovernmental Panel on Climate Change has predicted increased temperatures, higher sea levels and more extreme drought and flooding events in our region. A cap-and-trade system is widely perceived as one of the best options available to address climate disruption while minimizing adverse economic effects.

The principal attributes of a cap-and-trade system are the imposition of aggregate limits on emissions, allocation of allowances to each source and creation of a trading regime to allow a source that emits quantities in excess of its allowances to purchase credits from other sources. A trading system uses market incentives to encourage those sources that can reduce



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their emissions at the lowest cost to undertake reductions.

A prerequisite to an effective cap-and-trade system is knowledge of the emissions of each facility that will be awarded or sold allowances. An emissions registry can help determine the proper amount and distribution of allowances; the absence of a comprehensive registry has undermined the effectiveness of the European Union GHG regime.

#### THE PROPOSED RULE

The U.S. Environmental Protection Agency has recently taken a major step toward creating a comprehensive GHG database. On March 10, the EPA announced a proposed rule to require many large industrial facilities to monitor and report their GHG emissions to the EPA on an annual basis. The EPA intends to use this data to examine the emissions of each industry and the distribution of emissions from individual facilities within those industries.

The data would help the EPA determine the factors that influence GHG emission rates, inform offset program design and assist in evaluating climate change policy options and emission reduction opportunities. Unlike the inventories based on aggregated national data that the United States compiles annually in accordance with the United Nations Framework Convention on Climate Change treaty, the emissions data required by the proposed rule would be submitted on the facility and/or source level.

The proposed rule is the outcome of the provisions of the FY 2008 Consolidated Appropriations Act, which authorized funding for the EPA to develop and publish a draft rule “to require mandatory reporting of GHG emissions above appropriate thresholds in all sectors of the economy of the United States.”

The Appropriations Act also directed the EPA to require reporting from upstream producers (e.g. fossil fuel suppliers) and downstream sources (e.g. facilities that directly emit GHGs from their processes or fuel combustion). In the proposed rule, the EPA invoked its authority under Sections 114(a)(1) and 208 of the Clean Air Act to require upstream producers and numerous industrial categories to monitor and report their GHG emissions.

The EPA selected carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, sulfur hexafluoride,

hydrofluorocarbons, perfluorochemicals and other fluorinated gases as the GHGs to which the reporting rule would apply. These selected chemicals persist and disperse in the atmosphere. They are also the most common GHGs that result from human activity and that are not currently controlled by other mandatory federal programs.

GHGs such as water vapor, ozone depleting substances (ODSs), tropospheric ozone and black carbon are not included in the reporting rule either because they do not persist in the environment or, in the case of ODSs, are separately controlled by the Montreal Protocol.

The various GHGs differ in their capacity to trap heat and persist in the atmosphere (collectively, the global warming potential). CO<sub>2</sub> emissions constitute the vast majority of GHG emissions. Consequently, the proposed rule speaks of “CO<sub>2</sub>-equivalent” units (CO<sub>2</sub>e) to signify that quantities must be adjusted to account for their global warming potential. The EPA used a similar methodology when implementing the Montreal Protocol controlling ODSs. CO<sub>2</sub> constitutes approximately 80 percent of total CO<sub>2</sub>e emissions in the United States.

The EPA has identified seven design elements of the proposed rule and is soliciting comment on each. These elements include source categories; the level of reporting; applicability thresholds; reporting and monitoring methods; verification; frequency of reporting; and duration of reporting. Some of these elements are discussed below.

## SOURCES

The proposed rule identifies upstream and downstream source categories. Upstream sources that supply industrial gas or fossil

fuel to the economy must report the GHG emissions potential of their supplies. Likewise, the proposed rule covers direct emitters of GHGs that are large facilities in the electricity generation or industrial sectors including electricity generators, producers of chemicals, food processors, iron, steel, lead, magnesium and petrochemical producers, petroleum refiners, landfills, wastewater treatment facilities and mobile sources, among others.

Some overlap in proposed reporting

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obligations exists (e.g. coal mines and power plants both report). This double reporting provides a basis to evaluate the effects of low-carbon fuel standards on upstream sources, and the end-use emission standards that may be applied downstream, in order to make informed policy choices. The EPA estimates that the sources subject to mandatory reporting account for 85 to 90 percent of total annual GHG emissions in the United States.

## APPLICABILITY THRESHOLDS

For most facilities, the proposed rule

would establish a threshold of 25,000 tons per year (tpy) of CO<sub>2</sub>-equivalent GHG emissions from all applicable source categories located within the physical boundary of a facility. This threshold serves to exclude most small businesses from reporting obligations.

For some types of facilities (e.g. electricity generating facilities subject to existing GHG report requirements, aluminum, ammonia or cement facilities), reporting is mandatory without regard to amount, thereby ensuring a complete picture of that source category. A few categories (fugitive emissions from coal mining, emissions from mobile sources) have alternate thresholds. Facilities with stationary combustion units that have a maximum rated heat input capacity of less than 30 mmBtu/hr operating full time with all types of fossil fuel need not report. Reporting obligations are not imposed on those source categories the EPA determines cannot accurately measure their emissions.

## REPORTING, MONITORING METHODS

In designing the monitoring and reporting requirements, the EPA examined the submissions made under other federal mandatory and voluntary programs including the following:

- Climate Leaders: reporting of over 250 industry partners of corporate-wide emissions by type of emissions source.
- Non-CO<sub>2</sub> voluntary partnership programs addressing GHGs.
- The CHP partnership: generation of electricity and heat from the same source.
- The SmartWay Transport Partnership program: freight industry stakeholders.
- The National Environmental Performance Track Partnership.
- The Toxics Release Inventory: non-GHG

reporting rule for many facilities across all sectors.

- The Department of Energy voluntary GHG registry: reporting of companywide GHG emissions.

The EPA found the emission calculation principles and protocols used in these programs to be helpful in designing similar requirements for the current program. Likewise, electricity generators subject to the existing continuous emissions monitoring systems, or CEMS, rule for sulfur dioxide, nitrogen oxides and CO<sub>2</sub> would be required to undertake direct measurement of all GHGs in a manner consistent with the requirements of 40 CFR part 75. Facilities with units that do not have CEMS may directly measure emissions or use facility-specific calculation methods.

The EPA also reviewed state programs, including CCAR (California's voluntary GHG registry), TCR (U.S., Mexico, Canadian province and Tribe partnership), RGGI (regional cap and trade program covering CO<sub>2</sub> emissions from large electric generating units) and WCI (regional cap and trade program of western States and Canadian provinces). The EPA also examined the mandatory reporting rules effective or to become effective in 17 states.

Under the schedule established in the proposed rule, facilities would commence mandatory data collection on Jan. 1, 2010, and submit the first emissions report by March 31, 2011, and annually thereafter. The report would include total annual GHG emissions in metric tons of CO<sub>2</sub>e aggregated for all source and supply categories. The report would also separately present annual mass GHG emissions for each source category and supply category by gas, and specify the quantity of electricity generated

onsite. Separate reporting requirements by emissions rate are provided for vehicle and engine manufacturers.

A facility without any of the listed source categories but with stationary combustion onsite that exceeds the reporting threshold would be allowed to use an abbreviated facility report for 2010 emissions employing default fuel-specific CO<sub>2</sub> emission factors.

Records such as the data used to calculate the GHG emissions for each unit, operation, process and activity, categorized by fuel or material type, must be maintained for five years. In general, the reporting requirement is "once in, always in." Once a facility is subject to the reporting rule, it must continue to submit annual reports even if it falls below the reporting thresholds in later years.

## FUTURE STEPS

The EPA is seeking comment by way of data and analyses on each design element. The comment period for the proposed rule will close 60 days following publication of the proposed rule in the Federal Register.

One important issue is the potential effect of the proposed rule on other substantive Clean Air Act obligations. The EPA has stated that the reporting requirements do not reflect a final decision on the ANPR "Regulating Greenhouse Gas Emissions under the Clean Air Act" that the EPA published on July 30, 2008, in response to the U.S. Supreme Court's decision in *Massachusetts v. EPA*.

Likewise, they do not trigger prevention of significant deterioration, or PSD, requirements such as utilizing best available control technology, or BACT. At present,

PSD requirements apply to pollutants controlled under the Clean Air Act, not to those governed only by Clean Air Act reporting provisions, according to the "EPA's Interpretation of Regulations that Determine Pollutants Covered by Federal Prevention of Significant Deterioration (PSD) Permit Program," published Dec. 18. However, the EPA is currently reconsidering this interpretation, which, if changed, may place currently excluded GHG sources into the PSD regime.

More fundamentally, the mandatory reporting rule is an important first step in establishing the cap-and-trade system for regulating GHGs proposed by the president and certain members of Congress. To be sure, the publication of GHG emissions by facility may alone cause companies to seek to control their emissions to avoid adverse publicity. The principal effect of the proposed rule, however, is to establish a foundation for the effective regulation of GHGs. •