

FOCUS

The Paint and Coatings Industry: Addressing Climate Change Proactively

Efforts to control greenhouse gas (GHG) emissions as a means of addressing climate change have taken center stage of late. While states have been leading the way, the debate has now taken hold at the federal level. On the regulatory side, the U.S. Environmental Protection Agency (EPA) has proposed a plan to establish a nationwide system for reporting GHG emissions — a program that could serve as the basis for a federal cap on the buildup of carbon dioxide (CO₂) and other gases linked to global warming, which is the subject of recently drafted legislation.

One thing is certain: the promulgation of state, federal and international measures to curb GHG emissions will affect almost every sector of the U.S. economy, particularly energy production and consumption, agriculture, manufacturing, transportation and construction. While the U.S. paint and coatings industry has a relatively small carbon footprint, it is important to note that, for years, the paint and coatings industry has aggressively looked for strategies to produce products in an environmentally conscious way, without compromising product performance. What's more, the U.S. paint and coatings industry has also partnered with EPA through the National Paint & Coatings Association (NPCA/FSCT), as a participant in EPA's Sector Strategies Program, to seek out cost-effective methods for minimizing industry's impact on the environment.

THIS NPCA/FSCT ISSUE BACKGROUNDER REVIEWS THE LATEST EFFORTS TO REDUCE GHG EMISSIONS AT BOTH THE STATE AND NATIONAL LEVEL. IT DEMONSTRATES THE PAINT AND COATINGS INDUSTRY'S STRIDES IN MINIMIZING ITS ENVIRONMENTAL IMPACT, AS WELL AS ITS SUPPORT AND PREFERENCE FOR A NATIONAL PROGRAM BASED ON A REASONABLE THRESHOLD FOR EMISSIONS LIMITS THAT WOULD PREEMPT COMPETING STATE PROGRAMS FOR GHG REDUCTIONS.

A MINIMAL AND MINIMIZED FOOTPRINT

The paint and coatings industry has taken proactive steps toward reducing its carbon footprint, turning to more energy efficient technologies and reformulation: The introduction of high solids, low volatile organic compound (VOC) and hazardous air pollutant (HAP) paints; the use of low vapor pressure solvents; and the increasing use of powder coatings, have all significantly reduced emissions and energy use from our manufacturing processes, as well as end user processes. Business conditions have also led to dramatic changes in our manufacturing process.

One example is smaller batch sizes. The pre-dominance of smaller batch sizes — which means paints are being made in one container and not transferred — eliminates emissions from transfer/loading and cleaning operations during manufacturing and decreases energy consumption. In addition, many coating manufacturing companies have reduced emissions and energy use →

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through changes in equipment cleaning operations (frequency, cleaning methods and type of cleaning solvent; in fact many companies have switched to zero HAP solvents).

Industry R&D, market-demand, recent regulatory developments and the continuing market trend toward water-based coatings (82 percent of architectural coatings sales are environmentally preferable water-based paint), powder coatings, ultraviolet cure coatings, and other lower-emitting coating products have contributed to reductions in both HAP and VOC from production in recent years. For instance, emissions from HAPs were reduced by 67 percent between 1993 and 2005; Toxic Release Inventory (TRI) releases by the paint and coatings sector decreased by 65 percent during that same period.

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In fact, energy usage — and, as a result, GHG emissions — from the paint and coatings sector is miniscule as compared to other U.S. manufacturing sectors. According to EPA's *2008 Sector Strategies Performance Report*, in 2002, the paint and coatings sector purchased about 1.6 billion kilowatt hours of electricity for heat and power, which represented well under 1 percent of the total quantity of electricity purchased for heat and power by U.S. manufacturers. Moreover, the paint and coatings manufacturing sector accounted for less than 1 percent of the hazardous waste generated nationally in 2003; the industry recycles or recovers (for energy use) 88 percent of the waste it generates; and 97 percent of all waste solvents from paint and coatings manufacturing facilities are reclaimed for future use.

The paint industry is doing its part to seek renewable energy and minimize its environmental impression while still delivering products that help serve and protect our environment.



THE NATIONAL SCENE

EPA's April 2009 proposed rule requires annual reporting of GHG emissions beginning on March 31, 2011. This rule would apply to facilities that emit 25,000 tons per year (tpy) or more of CO₂ equivalents (CO₂e) or are in certain industrial categories (e.g., aluminum production, petrochemical refineries, cement production), as well as fuel suppliers and vehicle and engine manufacturers. Regulated entities would report on a facility level, except for fuel importers and vehicle and engine manufacturers, which would report on a corporate level. As proposed, the registry focuses on the biggest emitters, but contains a "once in, always in" provision, which means that if a facility trips the 25,000 tpy threshold at anytime, reporting would be mandatory even if a facility fell below that threshold.

It is important to note that the proposed rule does not require control of GHGs, but rather, requires only that sources monitor and report emissions. However, on Feb. 24, 2009, President Obama asked Congress to send him "legislation that places a market-based cap on carbon pollution." This "cap and trade" legislation would identify "covered entities," set aggregate caps for all GHG emissions, and establish carbon markets to facilitate the trading of emission allowances among covered entities. The President's approach seeks to yield a reduction of GHG emissions to 14 percent below 2005 levels by 2020, and by 80 percent or more below 2005 levels by 2050.

In response, the Waxman-Markey draft bill — the "American Clean Energy and Security Act of 2009" — outlines a market-based cap and trade program for GHG allowances, exceeding the President's GHG reduction goals by requiring a 20 percent reduction by 2020 (instead of 14), and 83 percent reduction by 2050 (instead of 80).



The draft bill would establish a cap on total GHG emissions (expressed as CO₂e), which decreases annually, for facilities emitting 25,000 metric tpy of CO₂e or more and for all facilities in certain specified industry sectors (e.g., cement production, titanium dioxide production). These facilities must obtain tradable "allowances" for each ton of CO₂e emitted, which can be sold or traded among emitters to facilitate compliance. The draft bill also directs EPA to set GHG-reduction performance standards for many facilities emitting 10,000-24,999 tpy of CO₂e. It further establishes an annual GHG reporting requirement starting in 2011 for all facilities emitting more than 10,000 tpy of CO₂e or any other source that EPA determines will achieve its GHG reduction objectives. As such, "smaller emitters" under 10,000 tpy are not necessarily free from GHG obligations under the Waxman-Markey bill.

An alternate to the Waxman-Markey bill sponsored by Rep. Chris Van Hollen (D-MD) focuses on the cap-side and proffers an express tax on overage emissions, as opposed to a trade system.

It is unclear at this time what impact any proposed legislation might have on the paint and coatings industry. The proposed GHG registry — if it stands — would exclude most if not all paint and coatings facilities from having to report greenhouse gases, since these facilities do not emit the requisite 25,000 metric tpy of CO₂e, which triggers reporting.

While not expressly affected by these thresholds, the industry prefers a national model with the suggested thresholds as opposed to multiple and rival state and regional restrictions on GHG emissions, which have cropped up in some 17 states around the country. These varying approaches range from simple registries to comprehensive technology-forcing legislation, which threaten industry's ability to comply with relative ease and surety.

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STATES PAVING THE WAY

On Aug. 7, 2008, Massachusetts Gov. Deval Patrick signed into law a measure that establishes the strongest cap in the country on economy-wide GHG emissions, mandating reductions of up to 25 percent below 1990 levels by 2020 and 80 percent by 2050. Massachusetts' Global Warming Solutions Act also calls for interim targets for 2030 and 2040, and provides tough penalties for violators, with civil fines of up to \$25,000 per day for emission violations.

By comparison, California's Global Warming Solutions Act of 2006 (A.B. 32) requires emissions in the state to be reduced to 1990 levels by 2020, and 80 percent below 1990 levels by 2050. In December 2008, the California Air Resources Board passed a "Scoping Plan" under A.B. 32, which sets the agenda and identifies a comprehensive list of measures to reduce GHG emissions, addressing virtually all sectors in California's economy. Notably, the Scoping Plan proposes a cap and trade program that would extend beyond California and into the broader Western Climate Initiative (WCI), whereby several U.S. states and Canadian provinces have agreed to cooperate in an extensive cap and trade system. The WCI currently proposes a general emission threshold for inclusion in the cap and trade program of 25,000 metric tons of CO₂e annually.

The issue of climate change and the regulation of GHG emissions are also taking shape under the California Environmental Quality Act (CEQA), and at a faster pace than the more comprehensive reduction measures proposed under A.B. 32.

CEQA is a public disclosure law that requires public agencies to identify significant environmental effects of development projects that they intend to approve, and to mitigate such significant effects when it is feasible to do so.

However, the form of the federal emissions reduction program and to what extent it may preempt California's legislation and others across the country remains to be seen.

CONCLUSION

While supportive of a reasonably set threshold limit to GHG emissions, the paint and coatings industry would urge a federal preemption of state-by-state limits, which otherwise would be extremely confusing and onerous for industry to meet. As long as the states continue to shape the debate, it is imperative that Congress act to maintain a reasonable national GHG limit that yields feasible reductions. The more advanced state and regional initiatives become, the more likely that litigation among states, federal agencies, and stakeholders could hinder implementation of an efficient federal regulatory scheme.

CONTACT

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NPCA/FSCT is a voluntary, nonprofit trade association working to advance the needs of the paint and coatings industry and the professionals who work in it. The organization represents paint and coatings manufacturers, raw materials suppliers, distributors, and technical professionals. NPCA/FSCT serves as an advocate and ally for members on legislative, regulatory and judicial issues, and provides forums for the advancement and promotion of the industry through educational and professional development services.

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