NEW STUDY CONFIRMS KEY ROLE FOR CHEMICAL INDUSTRY IN REDUCING GREENHOUSE GAS EMISSIONS

Environment - Energy 2009-07-10 06:17:47

Arlington, VA – The American Chemistry Council (ACC) has announced the findings of a new study revealing that for every unit of greenhouse gases (GHGs) emitted by the chemical industry, society saves more than two units of GHGs through use of chemistry products and technologies. By 2030, the GHG savings-to-emissions ratio could increase to more than 4:1, provided further emissions reduction steps by industry, policymakers and other stakeholders.

McKinsey & Company, the global management consulting firm, conducted independent analyses and overall project management for the study. The Öko Institut, a leading independent environmental research and consulting institution in Europe, conducted a critical review of the analysis and reviewed the calculations.

The International Council of Chemical Associations (ICCA), including ACC, initiated the study to help drive further reductions in the industry's greenhouse gas emissions – via improved production processes – while encouraging the use of those chemical products that save energy and create a net emission reduction along the chemical value chain. The chemical industry is the first global industry to embark on such an initiative.

The study used a life cycle carbon dioxide-equivalent (CO_2e) emissions analysis to assess the global chemical industry's impact on greenhouse gas emissions through the life cycle of chemical products and the applications they enable. Analyses were performed for over 100 individual chemical product applications. Emission savings were compared with all direct and indirect emissions linked to the chemical industry. Analyses spanned the major relevant products and sectors of the chemical industry and covered a representative portion of the emissions linked to the chemical industry. Finally, 2030 modeling scenarios were used to extrapolate how emissions for production and use phases may develop.

The McKinsey study found that the most significant emissions savings by volume come from building insulation materials, agrochemicals, lighting, plastic packaging, marine antifouling coatings, synthetic textiles, automotive plastics, low-temperature detergents, engine efficiency, and plastics used in piping. Some dramatic examples of the GHG emissions savings enabled by chemistry include (ratio of emissions savings to emissions):

Building insulation foam: 233:1 **Foam coating in district heating *:** 231:1 Synthetic diesel additives – fuel efficiency improvements: 111:1 Glass and carbon fiber for wind turbines: 123:1 Compact fluorescent lighting: 20:1 Marine fuel reduction due to use of anti-fouling coating: 20:1 Engine efficiency: 21:1 Low-temperature detergents: 9:1 Polymers for automotive weight reduction: 3:1

"Americans want a cleaner, greener future, and this analysis shows that chemistry already has a major role in helping the nation and the world reduce GHG emissions," said ACC president and CEO Cal Dooley. "Equally important, many of today's and tomorrow's energy-saving products and green jobs depend on chemistry. This new research confirms that the business of chemistry provides climate solutions."

"The chemical industry has exciting potential to enable GHG emission savings in decades to come, but reaching it will require steps by industry, consumers and policymakers," Dooley continued. "For our part, U.S. chemical industry emissions have fallen 16 percent since 1990, and we'll use this study to guide further operational improvement. Meanwhile, governmental policies that enable greater use of emission-reducing chemistry products and technologies will be key."

To achieve their emissions reduction goals, policymakers must make it a priority to construct policies that maintain the global competitiveness of the U.S. chemistry industry. Policies must ensure a level playing field so that we can keep

high-paying, green chemistry jobs in the United States and avoid the ‘leakage’ of production and emissions to more carbon-intensive nations. If leakage occurs, the unfortunate result would be a net increase in global emissions.

ACC supports policies to reduce greenhouse gas emissions. Our efforts are driven in part by support for sustainable chemistry—for making the products that meet the needs of today’s consumers, working openly and ethically with government and our communities and continually improving our products to reduce their impact on the environment and future generations.

The study is being launched today in the United States, following an announcement in Rome, Italy on July 7 and a forthcoming event in Tokyo, Japan on July 10. Additional information about the ACC announcement is available at http://www.americanchemistry.com/climatestudy. The full report and additional information about international announcements are available at http://www.icca-chem.org/.

*****District heating is used in dense, urban areas for residential heating and in industrial zones for heat or heating water. The heat is often obtained from cogeneration, a process sometimes used by the chemical industry that is an efficient way to generate power and steam.

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