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AS TSCA REFORM GETS ITS MOMENT IN THE SUN, WILL IT BRIGHTEN OR CLOUD PROSPECTS FOR A GREEN ECONOMY?

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For the first time in the 30-year history of the Toxic Substances Control Act (TSCA), Congress, the administration, the environmental community, and even industry groups are signaling support for TSCA reform. That is good news for the public and, if done right, good news for chemical and consumer product manufacturers looking to increase consumer confidence in the federal oversight process. One challenge for this coalition will be to update the national chemical control framework without undermining broader efforts to create a cleaner, greener, and more energy-efficient national economy.

Congress, the administration, and private investors are dedicating billions of dollars in funds to stimulate research, development, and commercialization of cutting-edge clean energy, transportation, and building technologies, in the hope of reducing our carbon footprint while boosting U.S. competitiveness and profitability in the clean-tech sector. In the past, green technologies have struggled to compete (at least with respect to price) in the marketplace against well-established fossil-fuel counterparts. With an unprecedented infusion of investment and stimulus funding, researchers are finding ways to narrow this competitiveness gap using new performance-enhancing chemicals and materials in product designs.

Advances in battery technology and chemistry are increasing the charge capacity and duration of electric batteries used in low emission vehicles and grid-scale storage. New nano-substances are increasing the performance of thermal fluids used in solar thermal energy generation and storage projects. New nano-composite materials are increasing the energy-efficiency of building materials used in new construction. There is enormous potential for chemical and material innovation to shift the cost-curve for clean-tech applications in the energy, transportation, and building sectors. Before these innovations can realize their full market potential, however, these substances and materials must be able to pass muster under TSCA or similar regulatory regimes. As such, changes to EPA's "new chemical" policy could affect the shape, pace, and direction of innovation in the clean-tech sector.

Under the current TSCA program, new substances are subject to pre-manufacture (or import) notification requirements that provide EPA with an opportunity to review and assess health and environmental risks without, theoretically, unduly delaying the commercialization of promising technologies. While EPA can demand risk data, it makes many decisions without requiring additional time and resource-intensive animal studies. Where EPA requires the submission of additional data, it can negotiate a timeframe in which manufacturers can generate those data, allowing companies to fund additional research using proceeds from the commercialized technology.

By contrast, the most prominent TSCA reform bill from the last Congress, S.3040: the Kid-Safe Chemicals Act of 2008, would subject new chemicals to the same testing and regulatory review process currently reserved for food-use pesticides. Under this "pesticide model," applicants would have to conduct an extensive battery of chemistry, health, and environmental testing, undergo an additional 12 to 24-month regulatory review, and then wait for EPA to make a safety determination (e.g., "reasonable certainty of no harm") before incorporating the substance into new commercial clean-tech applications, even industrial applications posing little to no exposure risk to the general population.
The pesticide regulatory model has proven effective for the several dozen new pesticide active ingredients EPA reviews annually, but it would be poorly suited to managing the 1,000 + new substances the TSCA program reviews each year, particularly at this critical

point in the green-tech/clean-tech renaissance. Sound chemical control policy needs to complement, not contradict, efforts to develop sound carbon control policy and supporting technologies.

In late September, EPA Administrator Jackson announced six principles to guide development of TSCA reform legislation. *See* http://www.epa.gov/oppt/existingchemicals/pubs/principles.html. Principle No. 5 affirms that "Green Chemistry Should be Encouraged," stating that "[t]he design of safer and more sustainable chemicals, processes, and products should be encouraged and supported through research, education, recognition, *and other means*." (emphasis added). While research and education are surely important, the most important "other means" of promoting green innovation will be to design a new chemical review process that allows EPA to manage risky new substances without inhibiting the innovative new technologies needed to promote renewable energy, combat climate change, and power the country's transition to a 21st century green economy.