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Greg Mayeur
Manager, Offsets Program Implementation
California Air Resources Board
1001 I St
PO Box 2815
Sacramento, California 95812
Via online submission

RE: Comments by Honeywell International Inc. on Workshop to Discuss Possible Revisions to the Cap-and-Trade Regulation

Dear Mr. Mayeur,

We appreciate the opportunity to submit these comments in response to the California Air Resources Board (CARB) Staff's March 2, 2018 workshop to Discuss Possible Revisions to Cap-and-Trade Regulation. We would like to express our strong support for (1) the recognition of the Direct Environmental Benefits of in- or out-of-state activity that reduces greenhouse gas emissions in California; and (2) the development of a new compliance offset protocol that would incentivize a near-term transition away from hydrofluorocarbons (HFCs) in foam blowing applications and thereby significantly reduce greenhouse gas emissions.

Honeywell International Inc. ("Honeywell") produces a low-GWP foam blowing agent, Solstice® Liquid Blowing Agent (HFO-1233zd(E)) (LBA), now available for use in applications that are eligible to generate offset credits under the American Carbon Registry (ACR) methodology titled, "Emission Reduction Measurement and Monitoring Methodology for the Transition to Advanced Formulation Blowing Agents in Foam Manufacturing and Use."[1]

We would strongly support CARB's consideration of a new offset protocol based on ACR's methodology. If CARB were to adopt a new protocol to credit the substitution of HFCs with low-GWP blowing agents, foam manufacturers would have a significant additional incentive to invest in low-GWP blowing agents. We believe that CARB should develop a new offset protocol for immediate use, as Honeywell and others will have offset credits to deliver to market immediately and well before 2021.

(1) Defining "Direct Environmental Benefits." In the post-2020 cap-and-trade program, Assembly Bill (AB) 398 limits the use of offset credits to 4% of an entity's compliance obligation, no more than half of which can be sourced from projects that do not "provide direct environmental benefits in state." AB 398 defines direct environmental benefits as, "…the reduction or avoidance of emissions of any air pollutant in the state or the reduction or avoidance of any pollutant that could have an adverse impact on waters of the state."

[1] The ACR methodology provides four foam applications that are eligible to receive offset credits: (1) XPS boardstock, (2) two-component rigid polyurethane spray foam, (3) rigid polyurethane injected foam (in certain limited end-uses), and (4) rigid polyurethane foam in residential refrigerators and freezers.

During the workshop, CARB staff asked for comment on a proposal to use the statutory definition of Direct Environmental Benefits in the regulation. We support CARB's proposed approach, which is to adopt the precise language of the statute into regulation. In our view, "direct environmental benefits" should include recognition of greenhouse gas emissions reductions resulting from project activity inside or outside the state. There is a prevailing scientifically sound view that GHG reductions (or avoided emissions) anywhere result in avoidance of adverse impacts on water everywhere, including "waters of the state."[2]

Transitions to low-GWP foam in California that meet the requirements of the ACR methodology would provide direct environmental benefits in California in several ways:

First, projects entirely located within California will yield direct greenhouse gas reductions in California, during the foam manufacturing process, use of the foam, and disposal, providing "direct environmental benefits" in California. Eligible foam products that are not manufactured in California but are subsequently sold and used in-state will also reduce greenhouse gas (HFC) emissions in-state from the gradual degradation of the foam during use in California and upon disposal in California.

Second, only a minority of the greenhouse gas emissions reductions described above would be recognized as offset credits. The ACR methodology authorizes credits for reductions resulting from the replacement of HFC blowing agents with low-GWP blowing agents during the foam manufacturing process and during the first ten years of the life of the foam. For conservatism, it entirely excludes emissions from degradation after the first ten years of use and from disposal of the foam at the end of its life.

The avoided emissions during use/degradation of the foam during its useful life after year ten and all of the emissions upon disposal would provide a net benefit to California's environment because these reductions are not credited by the ACR methodology. In other words, these emission reductions could not be monetized in the cap-and-trade system as offset credits. Instead, project activity would permanently lower greenhouse gas emissions in California.

Third, foam made with low-GWP blowing agents such as Solstice LBA produces foam with higher thermal performance in polyurethane foams, including spray and appliance foam, thereby reducing energy consumption, and any emissions associated with such energy consumption, where those products are used in California.

(2) Adoption of a New Offset Protocol. California is uniquely positioned to significantly accelerate the transition of high-GWP HFC foam blowing agents to low-GWP ones, such as Solstice LBA. Adopting a new compliance offset protocol like the ACR low-GWP foam methodology could yield around 8 million offset credits and avoid nearly 24 million tonnes CO_2e emissions (reductions that would not generate credits) annually from projects in North America.

By our estimate, there are at least six facilities in California that manufacture HFC-containing polyurethane foams for spray and panel applications. With an incentive to convert to a low-GWP blowing agent, these facilities could generate up to 416,000 credits and avoid nearly 1.1 million tonnes of CO_2e emissions annually in California alone.

[2] See, e.g., Hayhoe et al. "Emissions pathways, climate change, and impacts on California." Proceedings of the National Academy of Sciences. August 2004. Available on-line at http://www.pnas.org/content/pnas/101/34/12422.full.pdf; and, more recently, "How climate change could threaten the water supply for millions of Californians," Sacramento Bee, June 30, 2017. www.sacbee.com/news/local/article158679214.html

The opportunity to generate compliance offset credits for the substitution of HFCs with low-GWP blowing agents under a new offset protocol is particularly important given the uncertain future of the HFC phase out requirements imposed by the EPA rules under its Significant New Alternatives Policy (SNAP) program, which remain under challenge in federal court.[3] With the fate of the federal mandates uncertain, an additional incentive is needed to maintain the transition away from HFC-based blowing agents.

In the midst of this uncertainty, the potential to generate compliance offset credits for use in California's Cap-and-Trade Program would provide a substantial incentive for many foam manufacturers and users to invest in a near-term transition out of HFCs to low-GWP alternatives and would go a long way in making up for the momentum that EPA's SNAP rules would have sustained.

Additionality. ACR's methodology offers credit for greenhouse gas emissions reductions that go beyond business as usual. Low-GWP blowing agents continue to be the exception, not the norm, in the foam applications eligible to generate credits. For example, low-GWP blowing agents are used in fewer than 10-20% of polyurethane and XPS applications.

Viability of Projects. Honeywell expects to receive about 40,000 credits from ACR for pilot projects undertaken this year for activity during 2014-2015 period. Based on current plans, we expect the development of additional projects under the methodology, by Honeywell and others, to yield more than a million credits for eligible low-GWP replacements during the 2015-2019 period.

Early Action Credit. A new CARB offset protocol should recognize the investments made by early adopters, back to 2013, by allowing ACR credits generated under the existing methodology to be eligible for conversion into CARB compliance offset credits. As with other new offset protocols that have recognized early actors, doing so in this instance will reward companies that make investments in environmentally responsible actions and encourage others to do the same.

Conclusion. We urge California to consider adopting a new compliance offset protocol like the ACR low-GWP foam methodology that recognizes ACR credits under the methodology issued prior to CARB's new protocol, starting in 2013. Such a protocol would accelerate the transition to low-GWP foam blowing agents now slowed by the uncertain future of the requirements under EPA's SNAP program. A CARB low-GWP foam offset protocol would offer a significant incentive for foam manufacturers and users to invest in a near-term transition out of HFCs to low-GWP alternatives and could yield approximately 24 million tonnes of CO_2e emissions reductions in North America, including 1.1 million tonnes of CO_2e reductions in California.

Sincerely,

Laura Reinhard

Laura Reinhard
Vice President, General Manager
Honeywell Fluorine Products

[3] *Mexichem Fluor, Inc. v. EPA*, 866 F.3d 451 (D.C. Cir. 2017). Parties to the litigation, including Honeywell, have announced their intentions to appeal the decision to the Supreme Court.