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Clerk of the Board, Air Resources Board
California Air Resources Board
1001 I Street
Sacramento, CA 95812-2828

Electronically Submitted

Dear Clerk of the Board:

Praxair, Inc., (“Praxair”) provides the following comments on the *October 2, 2014 Fifteen Day Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms* (“October 2nd Amendments”). Praxair was founded in 1907 and became an independent publicly traded company in 1992. Praxair is a supplier of atmospheric gases and coating services business, and is globally recognized for its sustainability efforts (Dow Jones Sustainability World Index in each of the last twelve years, and World CDP Leadership Index for seven consecutive years). In California, Praxair has 1000 employees at 80 locations and five production facilities: two atmospheric, two carbon dioxide (“CO₂”), and one hydrogen. Praxair creates technologies, products and services that support our mission of making our planet more productive. We are committed to improving our customers’ environmental performance. And we do that by developing and implementing applications that help customers reduce operating costs, increase process efficiencies and improve their environmental performance.

As discussed below, Praxair requests that the Air Resources Board (“ARB”) further evaluate the proposal to remove CO₂ importers from the list of “emissions without a compliance obligation.” Even though there are currently only minor CO₂ imports, we believe this will change. As discussed below, new technologies using CO₂ will significantly increase demands for CO₂ in California. Some of these new demands may further California’s environmental goals and be responsive to the drought conditions. The ARB should not remove the exemption without further analysis of the future demand for CO₂. The ARB should also consider whether there is a need to maintain consistency with other aspects of the cap-and-trade by allowing a CO₂ importer to reduce its compliance obligation based on exports of CO₂.

DISCUSSION

The ARB proposes to amend the Cap-and-Trade Regulation to remove the compliance obligation exemption for carbon dioxide importers.¹ According to the ARB, the exemption is

¹ See proposed revisions to 17 Cal. Code Reg. Sec 95852(b)(12), available at: <http://www.arb.ca.gov/regact/2014/capandtrade14/capandtrade1415dayattach1.pdf>

unnecessary because currently no entities import CO₂ at levels that require reporting.² However, the ARB needs to consider the potential for importing CO₂ as a novel, environmental mitigation strategy. Energized fracturing using CO₂ is a proven, effective and clean approach to increase oil and gas production. CO₂ has been used in this application for more than three decades.

Praxair recently launched a new technology called DryFrac™, which is a waterless fracturing technology. DryFrac™ replaces water use in fracturing wells that are in shale and tight sand formations through the use of liquid CO₂. Through Praxair's state-of-the-art technology and extensive carbon dioxide supply chain, Praxair will be able to provide an alternative to water-intensive fracturing.³ This technology will have numerous environmental benefits when compared to the use of water for fracturing. DryFrac™ will help reduce water usage during California's drought conditions. In addition, Praxair and others are continuing to develop capabilities to capture and recycle CO₂ in this application. Various studies have confirmed the sequestration potential of shale formations.⁴ Finally, this new utilization of CO₂ product will create a new market demand for CO₂ as a byproduct that would otherwise be directly emitted as a waste product.

By removing the exemption for CO₂ imports, the ARB may place a barrier on the integration of DryFrac™ or other sustainable technologies that will rely on CO₂ imports as the CO₂ product supply chain adjusts to the new market demand for CO₂ product. Ultimately, Praxair envisions that the CO₂ product would be sourced locally/regionally (e.g. within California) to minimize transportation costs. However, it would take time for the market to develop and stabilize and for the infrastructure to be implemented. The ARB should therefore not remove the exemption for CO₂ imports.

If the ARB nevertheless removes the CO₂ importer exemption, then the ARB should allow CO₂ importers to reduce their compliance obligation based on the quantity of CO₂ that the company exports. The resulting compliance obligation should be the net of imports vs. exports. This "netting" approach is consistent with the treatment of other industries in the Cap-and-Trade. For example the compliance obligation associated with imported electricity can be reduced by "qualified exports" or through "wheeled" transactions.⁵ In addition, the ARB should consider whether CO₂ importers will be subject to more than one emissions obligation if the jurisdiction where the CO₂ is sourced also imposes an emissions reduction obligation. Such double regulation could create significant hurdles to the new sustainable technologies discussed above.

² ARB Staff presentation at September Board Meeting, Slide 8, available at: <http://www.arb.ca.gov/board/books/2014/091814/14-7-5pres.pdf>

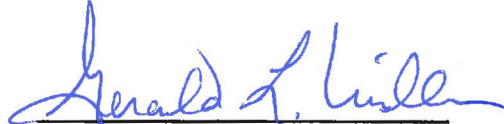
³ Praxair September 18, 2014 Press Release, available at: <http://www.praxair.com/~media/North%20America/US/Documents/News%20Releases/2014/Praxair%20Launches%20DryFrac%20Waterless%20Fracturing%20Technology.ashx>

⁴ See National Energy Technology Lab, *Interdisciplinary Investigation of CO₂ Sequestration in Depleted Shale Gas Formations* (June 2013), available at: <http://www.netl.doe.gov/File%20Library/Research/Coal/carbon-storage/FE0004731.pdf>; See also, New Scientist, *Fracking Could Be Combined with Carbon Capture Plans* (August 2012), available at: <http://www.newscientist.com/article/dn22232-fracking-could-be-combined-with-carbon-capture-plans.html#.VD6sZxbb6Ew>

⁵ 17 Cal. Code Reg. Sec. 95852(b)(1)(B).

Even though there are currently no reportable imports of CO₂ into California, the ARB should more fully analyze the potential ramifications of removing the exemption for CO₂ importers. Praxair would be pleased to work with staff on this issue and provide additional information on the potential environmental benefits associated with CO₂ imports. Praxair appreciates the opportunity to submit these comments.

Sincerely,



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