

---

**Air Products and Chemicals, Inc.**  
7201 Hamilton Boulevard  
Allentown, PA 18195-1501  
Telephone (610) 481-4911

April 4, 2014

Ms. Mary Nichols – Chair, California Air Resources Board  
1001 I Street  
PO Box 2815  
Sacramento, CA 95812

RE: Comments Regarding *15-day Rulemaking Package* (Released 21 March 2014) - Submitted electronically to the “CAPANDTRADE13” docket via [http://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=capandtrade13&comm\\_period=1](http://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=capandtrade13&comm_period=1)

Dear Ms. Nichols:

Air Products is a global, Fortune 250 company that supplies atmospheric, process, medical and specialty gases, specialty chemicals and process equipment serving a diverse range of industries, including primary metals, refining, electronics, food and glass sectors, as well as healthcare and many other general manufacturing industries. Air Products has over 400 employees and 30 locations in California, including numerous atmospheric gases (oxygen/nitrogen/argon) and hydrogen production facilities, electronic specialty gases and materials production and electricity generating facilities. In addition, Air Products has designed, installed, and supplies a fleet of hydrogen fueling stations across the state, facilitating the transition to carbon-free transportation.

Air Products welcomes the opportunity to submit comments regarding the proposed amendments to the cap & trade program, particularly the proposed changes in allowance allocation benchmarks for hydrogen production, since we are the largest merchant hydrogen producer in California. Over the course of the last several years, Air Products has worked very constructively with ARB staff and are pleased that our concerns with earlier approaches have been addressed in this latest proposal. We look forward to a continued working partnership with ARB staff to ensure an effective implementation of these aspects of the cap & trade program.

**SUMMARY COMMENTS:**

1. *Air Products supports the proposed hydrogen benchmarks which are consistent with ARB cap & trade principles*
  - a. *One Product – One Benchmark*
  - b. *Differentiation between gaseous and liquid hydrogen as distinct products, requiring distinct benchmarks*
  - c. *Consistent stringency with other product-based benchmarks*
  
2. *Air Products support the retroactive application of corrected hydrogen benchmarks to Compliance Years 2013 and 2014 through the “Allocation True-up” process*

**DETAILED DISCUSSION of COMMENTS:**

- 1. Proposed refinery and hydrogen benchmarks are highly consistent with ARB cap & trade principles*** – Air Products strongly endorses the underlying principles of “One Product – One Benchmark,” consistent benchmark stringency, and deriving benchmarks from data representative of the entire population of affected facilities. In this regard, Air Products supports ARB’s commitment demonstrated in this latest proposal to base benchmarks on all producers’ data, to propose discrete gaseous and liquid hydrogen product benchmarks, and to apply stringency to the benchmarks that is consistent with other industrial assistance product benchmarks.

The proposal maintains the principle of defining a single benchmark value for each distinct product – regardless of the many variations in practice (process, feedstock, facility ownership, etc.). We acknowledge the ARB’s efforts to expand the emission and production data set for deriving the gaseous hydrogen benchmark to include both refinery-produced hydrogen and industrial gas company, or “merchant”-produced hydrogen. The resulting benchmark value of 8.94 allowances/metric tonne of gaseous hydrogen produced is significantly more representative of the entire gaseous hydrogen production facility “fleet” than the “merchant-only”-based benchmark proposed in October 2013.

Further, ARB has correctly recognized the inherent differences in gaseous and liquid hydrogen products and derived discrete product benchmarks for each of them. While these products are the same at the molecular level, the nature of the production processes, physical form, purity and commercial markets served create very distinct CO<sub>2</sub> emission footprints in their production. The proposed value of 11.9 allowances/metric tonne of liquid hydrogen sold is appropriate and necessary to treat liquid hydrogen product with a consistent stringency.

These proposed benchmarks also restore a consistent stringency across all sectors/products eligible for industrial assistance. The proposed benchmark values are based upon “90% of sector average or best in class, whichever is greater,” for all hydrogen production. This was not the case under the interim benchmark originally applied for the first two years of the program, but is rectified under the new benchmark proposal. This principle of consistent stringency, when combined with the “One Product – One Benchmark” principle discussed above, ensures equitable treatment of all covered sectors in the state.

- 2. The corrected hydrogen benchmarks will be retroactively applied to Compliance Years 2013 and 2014 through the “allocation true-up” process*** – Air Products supports the application of the allowance allocation true-up process to allow for both changes in the applicable product benchmarks, as well as correct for differences between actual and anticipated production activity. The true-up formula will apply the new benchmark value to the 2013 compliance year when the 2015 allocations are made in October 2014, correcting for the lower benchmark used when the initial 2013 allocations were made in 2012. Likewise, the 2014 allocations made in October 2013 will be corrected through the true-up when 2016 allocations are made in October 2015. In this way, hydrogen

producers are treated properly and consistently with all other product-based industrial assistance recipients.

Air Products appreciates the diligent efforts by ARB staff and we stand ready to provide further support as the agency implements these important provisions of the cap and trade program. If you have any questions or need additional information to support Air Products position on these matters, please contact me by phone (610-909-7313) or email [adamskb@airproducts.com](mailto:adamskb@airproducts.com)).

Respectfully,

A handwritten signature in black ink that reads "Keith Adams, P.E." in a cursive style.

Keith Adams, P.E.  
Environmental Manager – Climate Change Programs

c: Eric Guter, Patrick Murphy, Lee Miller, Peter Snyder, Stephen Crowley – Air Products  
Stephen Cliff, Mary Jane Coombs, Eileen Hlavka, Mark Sippola – California Air Resources Board