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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

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 das 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 strongly recommends ARB include molecular hydrogen included in feedstocks as part of the "on-purpose hydrogen" production, consistent with the basis upon which the new benchmark was derived.***

3. ***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_2 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 consist 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. ***ARB has applied a new definition for gaseous hydrogen production that is inconsistent with the basis used for deriving the gaseous hydrogen product benchmark*** – The 15-day package includes a new term in the definitions for "on-purpose hydrogen gas", which under the proposed new benchmark becomes the basis for the allowance allocation. While this term was first issued in the revision to the Mandatory Reporting Rule in October 2013, it was only on March 28, 2014, that the ARB issued "Hydrogen Producers Reporting and Verification Guidance" which, for the first time, articulates how the term "on-purpose hydrogen gas" is to be interpreted; specifically, that any molecular hydrogen that in present in feedstock streams is to be excluded from the representation of the hydrogen plant's production. We strongly oppose this guidance, as it is inconsistent with the method by which the ARB has developed the benchmark.

   The ARB developed its proposed benchmark of 8.94 allowances/metric tonne of hydrogen using production data from some facilities that included molecular hydrogen contained in their feedstock. ARB could not have subtracted molecular hydrogen in developing its benchmark because such data was not reported to the ARB in the 2008-2010 timeframe. Air Products agrees that the methodology that the ARB used to calculate its benchmark was correct; it is the reporting guidance and not the benchmark that should be changed. The ARB's benchmark development process correctly recognized that there are greenhouse gas emissions associated with the processing of molecular hydrogen in the feedstock (both in contributing to the sensible heat addition needed and the purification process for recovery of this hydrogen) and that an accurate benchmark should reflect these emissions. It is essential that the ARB allocate allowances using the same methodology that it used to develop the benchmark. Accordingly, allowance allocations should be based on the total mass of hydrogen produced, including molecular hydrogen contained in the feedstock.

   If the ARB feels compelled to incorporate a requirement to subtract molecular hydrogen from the amount of "on-purpose hydrogen" produced, then the benchmark should be re-derived to account for the reduced production that would be reflected in the revised intensity denominator of the benchmark calculation.

3. ***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).

Respectfully,

Keith Adams, P.E.

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