AIR LIQUIDE

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November 4, 2016

Rajinder Sahota
Branch Chief
California Cap-and-Trade Program
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Proposed Amendments to California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulations

Dear Ms. Sahota:

I am writing on behalf of Air Liquide Large Industries U.S. LP ("Air Liquide") in response to CARB staff's informal proposals to amend the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulations presented at the October 21, 2016 Mandatory GHG Reporting and Cap-and-Trade Program Workshop.

Air Liquide is the world's leader in industrial and medical gases. Air Liquide and its affiliated companies operate twenty facilities and employ nearly 2,000 people in California. Air Liquide's California operations include two hydrogen production facilities that supply hydrogen to refineries in El Segundo and Rodeo.

Air Liquide has consistently supported California's Cap-and-Trade Program. Air Liquide has submitted comments in the past and submits the comments below to ensure that the program (1) maintains a level playing field among market participants who are subject to the program, (2) achieves its GHG reduction goals in the most efficient manner possible, and (3) does not unnecessarily harm California businesses generally or the industrial gas sector specifically.

1. **CARB should not promulgate command-and-control regulations.** Staff notes that the Environmental Justice Advisory Committee has recommended that CARB abolish the Cap-and-Trade Program after 2020 and instead impose command-and-control regulations on GHG emissions. Air Liquide strongly opposes this recommendation. The purported basis for this recommendation is the possibility that facilities located in economically challenged areas may purchase allowances or offsets rather than reduce emissions of GHGs, and that those facilities will therefore fail to reduce concomitant emissions of criteria and toxic air contaminants. But the state and federal governments already have in place a comprehensive scheme of air pollution control laws that are designed to assess and mitigate emissions of those air contaminants, and it would be

extremely unwise and inefficient to attempt to reduce them indirectly—as an intended side effect—of the AB 32 emissions reduction program. Not only would such an approach be less efficient than a cap-and-trade program, it would imperil industry support for AB 32's goals. Local air quality should be addressed through laws that are specifically designed to address criteria and toxic air contaminants.

2. **CARB should not reduce the use of offsets.** Regulated entities are currently allowed to satisfy up to 8 percent of their compliance obligations with offset credits. The 8-percent limit should not be reduced. Offsets reduce the cost of the Cap-and-Trade Program for regulated entities and allow low-cost reductions in GHG emissions to be used before higher cost reductions are attempted. The argument against offsets is similar to the argument against Cap-and-Trade generally, and is based on the assumption that the Cap-and-Trade Program can be used to reduce emissions of non-GHG contaminants (see Comment #1 above). Rather than eliminating offsets, the state and federal governments should address local air quality concerns through the laws that are specifically intended for that purpose.

3. **CARB should not increase the proportion of allowances that are auctioned.** Reducing allowance allocations to covered entities will have no effect on the reductions in GHG emissions achieved by the Cap-and-Trade Program, because the cap decline occurs regardless of whether allowances are freely allocated or auctioned. Regulated entities will already have a significant deficit of free allowances during the third compliance period. Even if all sectors continued to receive a 75 percent allowance allocation, industrial assistance allocations would fall to approximately 38 percent of initial allocations by 2030 due to the application of the cap-decline factor. Any reduction in industry assistance from 2020 levels will result in an additional indirect tax on consumers.

4. **CARB should provide industry assistance for process emissions that are unrelated to energy efficiency or combustion.** In determining the assistance factor for hydrogen production, CARB should provide industry assistance for process emissions that result from the basic chemical reactions that underlie the hydrogen production process. The Cap-and-Trade Program is designed to lower carbon dioxide emissions by driving increases in energy and combustion efficiency. However, the basic chemistry of the hydrogen production process produces carbon dioxide. To produce hydrogen, methane, propane, or other light hydrocarbons are combined with steam under pressure in the presence of a catalyst to form hydrogen, carbon monoxide and carbon dioxide. These "process emissions" cannot be reduced, and the reaction cannot be made more "efficient," because the carbon dioxide emissions result from the stoichiometry of the reaction that produces hydrogen. CARB should provide industry assistance allowances for these emissions in setting assistance factors for the hydrogen production sector.

5. **Air Liquide opposes retirement of unsold state-owned allowances.** The slight surplus of state-owned allowances is the result of depressed growth in California. If and when the state returns to a higher growth rate, unsold allowances will allow growth without an unnecessary spike in allowance prices, while still maintaining the state's progress towards achieving its AB 32 goals.

6. **Air Liquide is continuing to analyze CARB's proposed assistance factors based on domestic and international leakage risk.** Air Liquide anticipates submitting additional comments on this issue in future comment periods.

Air Liquide appreciates CARB's demonstrated willingness to engage stakeholders, including Air Liquide, and to address their comments and concerns in proposed regulations. Air Liquide also appreciates the opportunity to provide comments on staff's presentation and looks forward to further discussions with CARB on the issues addressed above.

Very truly yours,

DPhillips

Dwayne Phillips

Director
Hydrogen/Syngas On-Sites Business Unit