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Christina Zhang-Tillman
California Air Resources Board
Stationary Source Division
1001 I Street
P.O. Box 2815
Sacramento, CA 95812-2815

Re: Comments for Draft LCFS Regulation

Dear Christina:

On behalf of Air Products and Chemicals, Inc. the Hydrogen Energy Systems group is pleased to provide comment concerning the California Low Carbon Fuel Standard (LCFS) draft regulation that applies to California transportation fuels.

In review of the LCFS regulation we request the proposed regulation requires further consideration in extending the LCFS to a blended fuel of hydrogen-compressed natural gas, or HCNG. The current draft legislation in section 95420(a)(1) outlining the types of fuel intended for use for transportation purposes address compressed natural gas (CNG) in section 95420(a)(1)(C) and compressed or liquid hydrogen 95420(a)(1)(F) but not a mixture of both fuels. In consideration that compressed natural gas has already been adopted as a transportation fuel in vehicle fleets and mass transit operations in many cities in California, and hydrogen has always been recognized as a fuel having the most desirable properties, a mixture of hydrogen-compressed natural gas (HCNG) provides a logical pathway in further improving a clean alternative fuel such as CNG and sets the foundation for the longer term transition to clean hydrogen.

In comparison to CNG, HCNG has been shown to provide modest engine efficiency gains in addition to lower emissions savings. Using 5 to 15% hydrogen (by energy content) in compressed natural gas will further reduce lifecycle greenhouse gas emissions and provide a 50% reduction in NOx emissions. Considering the impending EPA 2010 NOx reduction targets HCNG provides both a technical and affordable solution to some fast approaching emission standards.

To include HCNG in the LCFS regulation document the Energy Economy Ratio (EER) of a HCNG fuel vehicle to a conventional gasoline or diesel vehicle will need to be established and incorporated in Table 7. Also, for determining LCFS compliance the calculation methodology of determining the amount of credit/deficits generated by the use of HCNG fuels will need to be formulated.

Air Products would like to commend the California Air Resources Board for taking the initiative to understand the underlying facts on alternative transportation fuels and taking a leadership position to effect such. We appreciate this opportunity to submit comments concerning the Low Carbon Fuel Standard Regulation. We welcome the opportunity to discuss our comments and viewpoints further with the Air Resources Board at your convenience.

Please feel free to contact me at (610)481-5222 if you have any questions or would like to discuss further.

Sincerely,



Brian B. Bonner
Product Manager/Hydrogen Energy Systems