



**Sent electronically**

September 3, 2015  
*Via Electronic Mail*

Clerk of the Board  
Air Resources Board  
1001 I Street, Sacramento  
California 95814

**Subject: Technology Assessment: Transport Refrigerators. Report prepared by the staff of the Air Resources Board, dated August, 2015**

Dear Clerk:

The Industrial Gases Panel<sup>1</sup> of the American Chemistry Council appreciates the opportunity to submit comments on the ARB staff report entitled “Technology Assessment: Transport Refrigerators” posted on the ARB website on July 31, 2015. We offer these comments to inform and enhance the Air Resource Board’s efforts.

The industrial gas manufacturing industry employs approximately 60,000 workers in the U.S. including 4,900 in California. The Industrial Gases Panel represents large global manufacturers of nitrogen, CO<sub>2</sub>, hydrogen, oxygen, helium and other specialty gases. The industry supplies these gases to hundreds of thousands of customers in numerous industries in California, including aerospace, agriculture, autos, chemical processing, electronics, energy, food and beverage, and healthcare, among others.

Our industry operates numerous production plants, business operations, and research & development facilities in California and has extensive distribution capabilities throughout the state. Our operations are user-friendly and adaptable to operational requirements.

The Panel commends the Board for its focus on alternative approaches to diesel fueled electro-mechanical transport refrigeration systems. In our view, ARB staff has provided a very thorough and thoughtful analysis of the various technology options for transport refrigeration including cryogenic refrigeration using liquid nitrogen or CO<sub>2</sub>, products that are manufactured by our industry.

The Panel supports responsible environmental policy including California’s efforts to reduce both GHG and criteria pollutants from mechanical refrigeration in transport. We concur with the

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<sup>1</sup> Airgas; Air Liquide; Linde North America; Matheson Tri-Gas; and Praxair



staff's conclusion that cryogenic refrigeration for transport is a "most promising" emission and noise reduction technology. It is in fact a simple, reliable, and available technology that could significantly reduce GHG and criteria pollutant emissions from transport refrigeration.

We appreciate the diligence of the ARB staff in completing this analysis. To the extent that additional data on liquid CO<sub>2</sub> or nitrogen production, or cryogenic refrigeration is needed to complete the assessment the Panel is ready and willing to assist. Thank you again for the very comprehensive analysis.

Should you have any questions or if we can provide any additional information, please contact me at 202-249-6731 or at [kevin\\_moran@americanchemistry.com](mailto:kevin_moran@americanchemistry.com).

***Kevin M. Moran***

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