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October 26, 2023

Rajinder Sahota
Chief, Industrial Strategies Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Comments submitted electronically

RE: Comments Related to the October 5th, 2023, Cap-and-Trade Amendment Workshop

Dear Ms. Sahota,

Air Products is pleased to provide comments in support of the California Air Resources Board's (CARB) rulemaking for the Cap-and-Trade regulation (C&T). We support California's climate goals and believe that Air Products can help California with the energy transition needed to meet the State's objectives and address global climate change. Hydrogen will play a critical role in the clean energy transition and reducing greenhouse gas (GHG) emissions of sources covered by the emissions cap in California.

Air Products is the only U.S.-based global industrial gas company and the world's largest hydrogen producer and supplier for use in numerous markets, including transportation. Within California, the company safely operates 10 hydrogen production facilities, approximately 30 miles of hydrogen pipeline and currently supplies and operates a network of light-duty and heavy-duty hydrogen fueling stations, facilitating the transition to zero-emission transportation. We are also participating in the Alliance for Renewable Clean Hydrogen Energy System (ARCH₂ES) hydrogen hub consortium to advance hydrogen hub funding in the state of California. Our existing hydrogen production facilities are subject to regulation under the Cap-and-Trade regulation.

On July 25, 2022, Air Products announced¹ that it will spend or commit at least \$4 billion in additional new capital for the transition to clean energy by 2027. In the two years preceding this announcement, Air Products had announced approximately \$11 billion in clean energy investments. Much of these investments include low carbon fuel and hydrogen for the California market.

Allowance Budgets

Air Products continues to support CARB's plan to model different scenarios of stringency, ranging from a 40% to 55% emissions cap reduction for 2030 relative to 1990 levels, to inform annual allowance budgets. We also support modeling further reductions and setting related allowance budgets beyond 2030 to reduce uncertainty for long-term investment in, and deployment of, clean energy technologies. Despite our role as a covered entity, we encourage CARB to select the most stringent target considered feasible

¹ Air Products, [Air Products Announces Additional "Third by '30" CO2 Emissions Reduction Goal, Commitment to Net Zero by 2050, and Increase in New Capital for Energy Transition to \\$15 Billion](#) (July 25, 2022)

based on the modeling, which will encourage the transition to cleaner technologies like hydrogen and maximize emissions reductions in the near and longer terms.

As CARB looks at removing allowances from different budgets in the program, we would like to reiterate a concept we proposed in our June comments to incentivize industrial decarbonization. Because industrial facilities are exempt from direct regulations to reduce carbon dioxide (CO₂), per Assembly Bill 398 (Garcia, Chapter 135, Statutes of 2017), CARB should consider a voluntary program nested within C&T to further incent the use of zero-GHG emission fuels like hydrogen when used at industrial sources. Next to transportation and electric generation, the industrial sector must realize substantial GHG reductions, as identified in the 2022 Scoping Plan Update, and hydrogen is highlighted as playing an important role in achieving these outcomes.² This incentive would provide credit beyond the reduced emissions at the source from the fuel switching. Such a program could use an allowance multiplier to provide additional economic incentive for the obligated facility that switches to a zero-GHG emission fuel or enable crediting through an adjusted benchmark in proportion to the amount of fuel used. The additional allowances needed to ‘fund’ the incentives could be covered by a portion of allowances removed and set aside from a particular budget. Such a program could encourage early action to help meet a higher reduction target and make use of surplus banked allowances to cover these reductions, while ensuring compliance with SB 32 requirements. Zero-GHG emission fuel would be defined based on both having zero-GHG emissions at the point where the fuel is consumed at an obligated facility, and a lower life-cycle carbon intensity than the fuel it is replacing. Crediting adjustments could be made based on a sliding scale to incent selection of the lowest carbon intensity fuel. We would look forward to the opportunity to explore this concept further with CARB and stakeholders through a public workshop.

Biogenic CO₂ Process Emissions

We support CARB’s proposal to recognize biogenically derived emissions from the combustion of certain biogenic fuels and extend this to similarly derived process emissions as described on slide 53 of the afternoon presentation in the Oct. 5 workshop. Similarly, the CO₂ derived from biogenic off gases originating from the production of renewable diesel or sustainable aviation fuel should be exempt from this obligation, whether from the combustion of fuel or a process emission.

Biomethane Book & Claim Provisions

Air Products appreciates the allowance for book & claim accounting for biomethane in the existing C&T regulation and suggests that CARB continue to support its use in the production of hydrogen without further restriction in terms of deliverability, additionality, or time matching. This is consistent with our advocacy in the amendment process for the Low Carbon Fuel Standard. Maintaining book-and-claim eligibility for biomethane associated with hydrogen pathways will not only continue to incent beneficial use of biomethane wherever it can be cost-effectively developed, but also help lower the carbon intensity of hydrogen to enable broad use of low carbon hydrogen across many sectors consistent with the 2022 Scoping Plan Update and ARCH₂ES hub development.

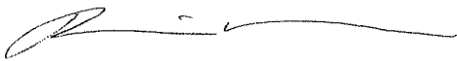
² 2022 Scoping Plan Update p. 207 “Decarbonizing industrial facilities depends upon displacing fossil fuel use with a mix of electrification, solar thermal heat, biomethane, low- or zero-carbon hydrogen, and other low-carbon fuels to provide energy for heat and reduce combustion emissions.” (emphasis added)

Energy Storage Provisions

Air Products appreciates CARB providing clarity regarding emissions accounting for energy storage systems for imported electricity. Based on the workshop presentation, energy storage would be defined to apply to all forms of energy storage. By law,³ green electrolytic hydrogen is defined as energy storage in California. We would ask CARB to confirm whether hydrogen energy storage systems would be included in any definition and related provisions in the regulation.

Air Products appreciates the opportunity to provide this feedback. Please feel free to contact me by phone (916-860-9378) or email hellermt@airproducts.com.

Respectfully,



Miles Heller
Director, Greenhouse Gas Government Policy

³ SB 1369 (Skinner, Chapter 567, Statutes of 2018)