



**Statement of David Joyner
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**Testimony on “Helium: Supply Shortages Impacting our Economy, National
Defense and Manufacturing”
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Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to testify today on issues relating to the domestic helium industry and the Federal Helium Reserve. My name is David Joyner, and I appear today on behalf of Air Liquide Helium America, Inc., the helium company for American Air Liquide, one of the Nation’s leading industrial and medical gas companies. Headquartered in Houston, Texas, Air Liquide’s U.S. operations employ over 5,000 U.S. employees in more than 200 locations throughout the country. For decades, Air Liquide has offered industrial and medical gases and related services to the Nation’s largest industries including manufacturing, electronics and healthcare. As a company, Air Liquide is focused on technological innovation to help make our Nation’s manufacturing and industrial sectors more efficient, environmentally friendly and productive. In support of that, Air Liquide operates its Delaware Research and Technology Center (DRTC) which houses more than 100 scientists and engineers specifically devoted to developing innovative applications for gas products in sectors such as electronics, healthcare, cosmetics, energy and food, as well as supporting helium conservation initiatives such as recovery and re-liquefaction.

Most relevant to the topic of the Subcommittee’s hearing today, Air Liquide is a major supplier of refined helium in the United States and globally to customers that range from companies on the cutting edge of the electronics industry to health researchers, automotive suppliers, laboratories and manufacturing facilities all over the world. I have been with Air Liquide working in the industrial gas sector for over twenty years. As President of Air Liquide Helium America, Inc. for the last two years, I have a strong appreciation of the importance of helium, a non-renewable resource on our planet, whose utility has grown with the passage of time. I have also gained an in-depth understanding of the helium market both globally and domestically.

When Congress passed the 1996 Helium Privatization Act (the 1996 Act), it was assumed that the supply of crude helium in the Federal Helium Reserve would last until 2015. It now appears likely that the Federal Helium Reserve’s supply of helium could last until 2020 if properly managed. Despite the amount of remaining helium, the funding mechanism in the current law could lead to the closure of the Federal Helium Reserve by the Summer of 2013. This would effectively take approximately a third of the global supply and half of the domestic supply of helium offline, creating shortages and increasing the cost of helium for end-users substantially.

Thus, the timing of this hearing is critically important as Congress must act in order to ensure access to the helium remaining in the Federal Helium Reserve.

As members of this Subcommittee have noted in previous hearings, a stable supply of helium is important to our Nation's economy as it is a vital component in products such as magnetic resonance imaging (MRI) machines and airbags for the automotive sector. Helium is also important to our Nation's security as it used in our defense surveillance programs. Finally, the reliability of our helium supply is important for the Nation's research efforts such as those being undertaken at our Delaware Research and Technology Center and at our Nation's national laboratories. These important efforts would be threatened by any sustained shortage in the domestic helium supply.

For these same reasons, it is important to consider what changes can be made to create a more open and competitive helium market that would improve reliability and benefit end-users. To that end, for today's hearing, I would like to confine my remarks to two issues that we see as important as the Subcommittee considers issues relating to the Federal Helium Reserve: (1) accessibility; and (2) pricing.

I. INCREASING ACCESS AND CREATING A MORE COMPETITIVE AND TRANSPARENT MARKET FOR FEDERAL CRUDE HELIUM

Within the context of the BLM infrastructure providing helium from the Federal Helium Reserve, there are both refiners, companies that own and operate helium refineries, and non-refiners, companies that sell refined helium to end-users but who must contract with refiners to obtain refined helium. Air Liquide is a non-refiner and, as such, we must contract with refiners—who are also our competitors in the sales market—to be able to distribute any crude helium purchased from the BLM. Without such “tolling” contracts, non-refiners are effectively shut out of the market and end-users are left with a closed market dominated by just four companies—those who own the refineries connected to the Helium Pipeline.

As the Subcommittee is aware, the helium stored at the Federal Helium Reserve is “crude” helium which must be refined (i.e. “tolled”) into liquid before it is transported to other facilities for additional processing and then on to end-users. The process of refining helium involves the transport of the crude helium from the Federal Helium Reserve through the Helium Pipeline—a system that runs through Kansas, Oklahoma, and Texas—to one of six refining facilities that are located on the pipeline. These six refining facilities are owned by just four companies and were established by those companies in the last century to take advantage of privately-owned crude helium supplies. Nevertheless, with the enactment of the 1996 Act and the resulting use of the federal government's infrastructure and natural resource to sell back crude helium into the system, these companies have gained the unexpected windfall advantage of controlling access to federal crude helium due to their preexisting refineries. As BLM has testified, no new refineries can be added on the federal pipeline due to capacity constraints.

The current allocation system maintained by BLM in its sales of crude helium from the Federal Helium Reserve provides 94 percent of the crude helium to these refiners and six percent to the rest of the market. This current system has significant drawbacks that were noted by the

National Research Council's 2010 report, *Selling the Nation's Helium Reserve*, (the "NRC 2010 Report") which stated: "given that refining the helium must take place at one of the facilities connected to the Helium Pipeline, the limited number of potential processors of federally owned crude helium place significant restrictions on alternatives to the current sale procedures being followed by BLM."¹

These restrictions include the fact that potential private bidders for BLM helium—outside of the four companies that own the refineries on the Helium Pipeline—are, entirely dependent upon the ability to have these refiners toll the BLM crude helium at a refinery on the Helium Pipeline in order to get the gas to end-users in the market. Since the refining capacity is captive to these refineries and tolling for other private bidders is solely at a refiner's discretion, the existing helium refiners have effective control over the remaining six percent of helium capacity and an additional market advantage. Moreover, any amount of crude helium that remains unsold reverts back to the refiners for purchase—another disincentive for those companies to provide tolling services. Proof that this system does not promote a competitive market can be seen in the fact that, in recent years, Air Liquide has been the only non-refiner to purchase any amount of the six percent allocation.

The consequences of the situation described above have important implications for domestic end-users of helium. Adopting a more market-based approach was recommended by the NRC 2010 Report which stated the following:

The Bureau of Land Management (BLM) should adopt policies that open its crude helium sales to a broader array of buyers and make the process for establishing the selling price of crude helium from the Federal Helium Reserve more transparent. Such policies are likely to require that BLM negotiate with the companies owning helium refining facilities connected to the Helium Pipeline the conditions under which unused refining capacity at those facilities will be made available to all buyers of federally owned crude helium, thereby allowing them to process the crude helium they purchase into refined helium for commercial sale.²

Utilizing this approach would result in a more accurate and transparent helium market and would benefit consumers by increasing the number of suppliers competing for the business of federal users and open market users with helium from the BLM. In an analogous situation, the United States has recognized the benefits of opening privately owned interstate pipeline capacity to the market in the natural gas industry where ownership of transportation capacity rights is held separate from ownership of the actual gas pipeline.³ Noting the impact this system has had on the domestic market, the report states: "[u]nbundling of capacity rights from facility ownership

¹ *Selling the Nation's Helium Reserve*, National Research Council: Committee on Understanding the Impact of Selling the Helium Reserve, The National Academies Press (2010).

² *Id.* at 8.

³ *Shale Gas and U.S. National Security*, Kenneth B. Medlock, et al., James A. Baker III Institute for Public Policy (July 2011).

makes it possible for a producer to access markets through a competitive bid for pipeline capacity.” To attain this same goal for helium, we would recommend that any actions relating to the Federal Helium Reserve include measures to open the Federal Helium Reserve to a wider range of buyers and establish policies to ensure greater access to crude helium exists within the market.

One proposal would be for BLM to toll a percentage of federal crude helium sales with refiners that would then be for sale to any qualified bidders as refined helium in the Non-Allocated Sale. In return for tolling services, BLM would pay standard tolling fees to refiners (fees that would be reimbursed by the ultimate buyers) plus provide a bonus amount of Federal crude helium as an additional incentive for the refiners to participate. The refined helium would then be sold to any qualified bidder at a price determined by the Federal crude helium price plus the tolling fees paid by BLM. We believe this proposal benefits end-users by creating a true market for Federal helium and also presents an opportunity for refiners to toll available refining capacity in exchange for increased federal allotments.

Such an incentive-based approach is not unprecedented. BLM recently piloted a methodology that encourages bidding to supply helium to federal users via the “in-kind” program through the allocation of additional corresponding helium volumes to refiners who agree to toll the in-kind volumes. An expansion of this methodology to include open market uses as well as an incentive for additional volumes for a refiner, above that of the corresponding tolled volume, would not interfere with contractual arrangements between private parties. And, it would increase participation and transparency in the market and provide greater competition and reliability for end-users.

II. SEPARATION OF BLM-SPECIFIC FEES FROM BLM CRUDE PRICE TO AVOID UNINTENDED GLOBAL PRICE IMPACTS

Under the provisions of the 1996 Act, the BLM was directed to sell off the helium from the Federal Helium Reserve at a price solely designed to pay down the Reserve’s existing debt. Clearly, this has had the impact of distorting the sales price of BLM helium in comparison to the actual market price which is set by domestic and global supply and demand. Another impact, resulting from the fact that BLM has historically and still today, represents the largest single source of helium capacity in the world, is the widespread use of the “BLM crude price” as a benchmark in private helium sales contracts all over the world. To compensate for the artificially low benchmark price, as the NRC 2010 Report states, “[m]any if not all of the contract adjustments also include escalation terms that maintain the premium over BLM set in the adjusted price terms of the renegotiated crude contracts[.]”⁴

The importance of this issue is that rapid increases in the BLM crude price, as have been the case recently, trigger the escalation clauses in the sales contracts referenced above. The resulting increase in helium prices is then passed on to end-users who could be unduly harmed as an unintended consequence of the way BLM sells helium. An example of this downstream impact was recently seen when BLM announced an 11 percent increase for the BLM crude price in 2012

⁴ *Id.* at 26.

(the price increase in 2011 was just one percent). A BLM statement explained that the increase resulted from new pricing factors such as an “Enrichment Factor” and a “Conservation Factor” designed to encourage industry conservation of helium. Such costs are unique to the BLM source only and not relevant to other global sources. However, as a result of the price increase from these non-market factors and because the BLM crude price is used as a benchmark in helium contracts around the globe, most global sources of helium will now see an 11 percent price increase as if the open market had created such an increase in a one-year period, despite the fact that they were already at or above the actual market price. The impact of this increase will be non-market driven cost increases to end-users in the United States and abroad.

To prevent this undesirable result, we recommend the separation of the “fees” cited recently by BLM—i.e., for Enrichment and Conservation—from the BLM crude price, as well as the independent step-change adjustments in the price to reconcile the lower base and the resulting current market price. By clearly separating the non-market fees and corrective adjustments from the current BLM crude price—which has no relation to the actual helium market—private companies will be able to adjust existing contracts in accordance with true market drivers and avoid the artificial increases causing undue harm to end-users. Such a solution would allow the BLM to collect the full revenue stream and ensure that the federally supported Reserve maintains its ability to operate effectively for years to come while protecting helium end-users domestically and around the world from dramatic and unpredictable swings in price. Consumers of the BLM Reserve would still be paying for its continued maintenance, operation, and upgrades through this fee structure but would be doing so in a way that is directly accountable to the federal government’s investment. They would also be doing so through a fee system that the BLM itself has already begun to establish with its latest price increase. Similarly, consumers of other helium sources, both domestically and abroad, could be secure in the fact that supply and demand and business acumen will govern their price, not unrelated government actions that are specific to the BLM reserve and not relevant to other helium sources.

Once again, Air Liquide appreciates the Subcommittee’s attention to this important issue and supports the goal of ensuring the continuing viability of the Nation’s helium supply. We believe the changes to the current system described above are achievable and would do much to add competition to the market and benefit consumers. I thank the Subcommittee for inviting me to testify, and I would be pleased to answer any questions you may have.