

**Statement of  
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**Senate Committee on Energy & Natural Resources  
Subcommittee on Public Lands, Forests, and Mining  
S. 1572, Helium Extraction Act of 2017  
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Thank you for the opportunity to testify on the Federal helium program managed by the Bureau of Land Management (BLM), and on S. 1572, Helium Extraction Act of 2017. S. 1572 would amend the Mineral Leasing Act of 1920 (MLA) to provide a mechanism for industry to produce helium from Federal lands. The Department of the Interior (Department) appreciates the opportunity to review S. 1572 and supports this legislation.

We also appreciate the sponsors' interest in the BLM's helium program and would welcome the opportunity to work with the sponsor to improve management of this valuable commodity and to ensure that Federal agencies retain assured access for future national security, biomedical, and other technical purposes.

**Background**

The BLM plays a key role in the careful management and stewardship of the only significant long-term storage facility for crude helium in the world, known as the Federal Helium Reserve (Reserve). Helium is a critical, non-renewable natural resource that is important in military reconnaissance, medical imaging, space exploration, fiber optics manufacturing, welding, and commercial diving. Helium is a by-product of oil and natural gas production and is usually captured by stripping it from the natural gas. Geologic conditions in Texas, Oklahoma, and Kansas make the natural gas in these areas some of the most helium-rich in the United States, often ranging from 0.5 to 1.5 percent of the gas extracted during production.

**History of the Federal Helium Program**

Because of helium's potential to lift military reconnaissance devices high above battlefields, the Federal government's interest in the resource dates back to World War I. Recognizing this key military use for helium, the Mineral Leasing Act of 1920 reserved to the Federal government all helium produced on Federal lands – a reservation that remains in effect today. After World War I, recognition of the potential for helium recovery in the Texas Panhandle, Western Oklahoma, and Kansas led to the development of the Federal helium program focused in that area. In 1929, the Bureau of Mines commissioned the Amarillo Helium Plant and Cliffside Gas Field Facility near Amarillo, Texas, to produce helium-bearing natural gas from a naturally occurring geologic field known as the Bush Dome Reservoir.

After World War II, Federal use of helium shifted toward space exploration. The 1960 Helium Act Amendments changed the program's mandate from exclusive government production of

helium to conservation of the resource by encouraging private natural gas producers to sell extracted crude helium to the Federal government for storage in the Bush Dome Reservoir. In 1996, the Helium Privatization Act (HPA) required the BLM (successor to Bureau of Mines) to make available for sale the vast majority of the stockpile of crude helium from the Reserve, in a manner to avoid market disruption. The BLM fully implemented this direction. In 1996, the Bush Dome Reservoir stored approximately 30.5 billion cubic feet (Bcf) of helium; by April 2017, about 4.4 Bcf of Federally owned helium and about 3.2 Bcf of privately owned helium remained in the Reserve.

### **The BLM's Helium Operations**

The BLM's current helium program operates not only the original storage and pipeline system, but also a crude helium enrichment unit, owned by private industry refiners, that facilitates transmission of helium to private helium operations on the BLM's helium pipeline. The BLM also conducts domestic and, to a lesser extent, international helium resource evaluation and reserve tracking to determine the extent of available helium resources.

The BLM is responsible for selling helium from the Reserve to private entities at market-based prices determined by industry surveys and auctions. Federal users (e.g., the Departments of Energy and Defense, NASA, and the National Institutes of Health, among others), which primarily use helium for research and operations, may access Federal helium at a discounted rate through the current helium "In-Kind" program managed by the BLM. The In-Kind price is calculated as a discount from sales and auction prices. Federal agencies and their contractors generally purchase all of their refined helium from private suppliers who, in turn, purchase an equivalent amount of crude helium from the Reserve. In 2016, Federal agencies purchased about 122 million cubic feet (MMcf) of helium through the In-Kind program.

After funding operations, the BLM returned \$115 million to the U.S. Treasury in 2016. The Federal Helium Program operates using a revolving fund not subject to annual appropriations. All revenue generated from the helium program is deposited in the fund. This includes revenue derived from auctions and sales of helium from the Federal Helium Reserve, oil and gas residue sales from the crude helium enrichment process, storage and transportation fees, and royalty and fees sales from helium produced on Federal lands.

### **The Helium Stewardship Act of 2013 (Public Law 113-40)**

Continuing Congressional interest in privatizing the helium market ultimately resulted in enactment of the Helium Stewardship Act (HSA) of 2013. The HSA established September 30, 2021, as the sunset date for the Federal helium program. For the years preceding the sunset date, the HSA created a set of phased authorities for the BLM's management of the Reserve, establishing a "glide path" by which auctions and sales from the Reserve would draw down the amount of helium until there remained only 3 Bcf of helium, which would be reserved solely for Federal users.

### **Helium Sales & Auctions**

The BLM is implementing the HSA's statutory directives to sell helium from the Reserve to a level of 3 Bcf of recoverable helium (not including privately stored helium) by 2021. This will be accomplished with annual sales and auctions of decreasing volumes through 2021. The BLM

expects to reach the 3 Bcf milestone after this sale. Anyone meeting the statutory definition of a “qualified bidder” may participate in the helium auctions. A qualified bidder is a person seeking to purchase helium for the person’s own use, refining, or resale to users.

The BLM offered helium volumes in three distinct sales in FY 2017 for delivery in FY 2018:

- The “FY 2018 Delivery Phase B Auction,” conducted in July 2017, of 500 MMcf in 30 lots, for \$59.7 million. The helium that was auctioned represented over 55 percent of the total volume that the BLM will make available from the Reserve in FY 2018. This met the 55 percent requirement mandated in the HSA.
- The “FY 2018 Delivery Phase B Non-Allocated Sale,” conducted in August 2017, of 40 MMcf for \$4.76 million.
- The “FY 2018 Delivery Phase B Allocated Sale,” conducted in August 2017, of 360 MMcf for \$42.8 million.

The total volume of helium sold, excluding In-Kind helium, was 900 MMcf, and the total revenue generated from helium sales in FY 2017 was \$107.2 million. The BLM intends to hold the next sale and auction on August 31, 2018, for delivery in FY 2019. At this sale, 210 MMcf will be offered at auction, an additional 9 MMcf will be offered at the “Phase B Non-Allocated Sale,” and 81 MMcf will be offered at the “Phase B Allocated Sale” for a total of 300 MMcf.

### **Helium Production on Federal Lands**

Helium commonly exists as a minor component of most natural gas plays. Natural gas typically is transported by pipeline to a processing plant where it is separated into marketable components, which could include helium if it is present in sufficient amounts. Because the helium from leases on Federal lands is reserved to the United States (i.e., there is no authority under the MLA to lease helium), natural gas lessees now can enter into contracts with the BLM to provide for the processing and sale of the helium. This type of arrangement occurs, for example, near Kemmerer, Wyoming, where helium produced from Federal lands partially supplies an ExxonMobil helium refinery.

Similar contracts can enable the recovery of helium as a primary gas in combination with a BLM oil and gas lease, and is feasible where the gas composition in a reservoir consists of relatively higher helium concentration in a low Btu gas stream. For example, the BLM approved an Application for Permit to Drill (APD) for a 1,100-foot exploratory well in the Harley Dome gas field in eastern Utah and an associated right-of-way to transport the produced gas via a surface pipeline to a new gas processing plant. With sufficient quality and quantity of helium, the proponent constructed a four-inch, 7,183-foot pipeline to a small plant where the helium is removed from the gas stream and compressed for truck transport. The well is located five miles west of the Utah-Colorado border on Federal lands in northern Grand County and the helium extraction plant is located 1.4 miles from the well on private property.

### **Helium Extraction Act of 2017**

S. 1572 would amend the MLA to define helium as a natural gas for purposes of lease extension. This would have the practical effect of allowing helium production when there are no economic

quantities of oil and gas being produced from the leases (which would trigger expiration of the leases under the current MLA).

The BLM supports S. 1572 as it not only opens up public lands to helium development but also supports the administration's priorities to secure reliable supplies of critical minerals, including helium.

### **Report to Congress – Moving Forward / Future Needs**

To prepare for the sunset of the Federal helium program, the HSA directed the Department, with other agencies, to prepare a Report to Congress on a plan to provide for an orderly transition to a privatized helium system by 2021. The HSA required that the Report offer a Federal Agency Helium Acquisition Strategy, including a description of a 20-year Federal strategy for securing access to helium that minimizes any potential supply disruptions for Federal users. This Report was transmitted to the Congress on April 1, 2016. As discussed in the 2016 Report, the BLM is on track for this transition.

When the transition to a privatized system occurs, Federal users will no longer be able to meet their helium requirements through the Federal Helium Reserve and the In-Kind program, and will need to find new sources of helium. Federal defense and research access to helium would rely on the private helium market, and market prices. This will likely result in increased costs to meet Federal helium requirements for defense and homeland security uses, and in planned aerospace programs. The Report to Congress recommends that a new Royalty In-Kind program be created which would provide Federal agencies with an assured source of helium into the future. Under a new Royalty In-Kind program, rather than the royalties that BLM currently receives, the BLM would track the equivalent helium volumes at each refining plant. The refiner would subsequently make that amount available to Federal agencies. Federal agencies could then enter into contracts with refiners to obtain helium.

### **Conclusion**

Thank you for the opportunity to present this testimony. The Department welcomes further discussion about the BLM's helium program and its role in meeting future helium needs for the country. I would be glad to answer any questions you may have.