

**Statement of
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U.S. Senate Committee on Energy and Natural Resources

S. 2374, Helium Stewardship Act of 2012

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Mr. Chairman and members of the Committee, thank you for the opportunity to testify on S. 2374, the Helium Stewardship Act of 2012, which makes various changes to the Helium Privatization Act of 1996, including establishing a phased approach to drawing down the Federal Helium Reserve. As indicated by a National Academies of Science (NAS) report published in early 2010, the market for helium has proven more volatile than expected over the last 15 years and current law's requirement that the Bureau of Land Management (BLM) sell-off nearly all of the Federal Helium Reserve by 2015 could pose a threat to the availability of this resource for future U.S. scientific, technical, biomedical, and national security users of helium. The Department supports the helium-related provisions of the bill and welcomes the opportunity to improve the management of this valuable commodity.

S. 2374 also includes a provision that extends for 2 years the royalty rate reduction provided for under the Soda Ash Royalty Rate Reduction Act of 2006, which expired in October 2011. The Department does not support an extension of the royalty rate reduction on soda ash, and cannot support this provision of the bill.

Background

Helium is a critical, non-renewable natural resource that plays an important role in medical imaging, space exploration, military reconnaissance, fiber optics manufacturing, and underwater diving. The most common and economical way of capturing helium is by stripping it from natural gas during gas production. Geologic conditions in Texas, Oklahoma, and Kansas make the natural gas in these areas some of the most helium-rich in the United States, ranging from 0.5 to 1.5 percent of the gas extracted during production. 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.

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 area (collectively, the "Hugoton" field) led to the development of the Federal helium program focused in that area. In 1929, the Bureau of Mines built the Amarillo

Helium Plant and Cliffside Gasfield 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 towards space exploration, and in 1960 Congress passed the Helium Amendment Act. This Act 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. The Act granted the Bureau of Mines the authority to borrow funds from the U.S. Treasury to purchase the helium, with the expectation that the proceeds from future sales of helium would allow the Bureau of Mines to repay the debt. This borrowing authority, established by Congress in lieu of a direct appropriation, required the Bureau of Mines to repay the loan by 1985. Subsequent legislation extended the deadline to 1995.

Federal demands for helium rarely, if ever, met the expectations underlying the terms of the Treasury's loan to the Bureau of Mines. When the 1995 deadline to pay off the debt arrived, the \$252 million the Bureau had spent on privately-produced helium had increased to \$1.3 billion (principal and interest), and the Bureau of Mines appeared to have little prospect of ever repaying the debt. In his 1995 State of the Union address, President Bill Clinton stated that it was his Administration's goal to privatize the Federal helium program.

Congress subsequently passed the Helium Privatization Act of 1996 (HPA), which required the BLM (which assumed jurisdiction over the program after the termination of the Bureau of Mines) to make available for sale the vast majority of the stockpile of crude helium. The mandate directed the BLM to begin selling helium as late as 2005, in order to avoid market disruption. The BLM was to make a consistent amount of helium available every year at a price based on the amount of remaining helium debt and the amount of helium in storage. When Congress passed the HPA, there was approximately 30.5 billion standard cubic feet (scf) of helium in storage in the Bush Dome Reservoir. The HPA mandated the BLM to make available for sale all of the helium in excess of a 600 million scf permanent reserve.

Additionally, the HPA required the BLM to cease all helium production, refining, and marketing activities to effectively privatize the refined helium market in the United States. Finally, the Act provided for the NAS to review the impacts of the 1996 Act. The NAS published its first study in 2000, and released a follow-up report in 2010.

The BLM's Helium Operations

The BLM currently operates the Federal helium program with a primary goal of paying off the "helium debt." To this end, the BLM has paid over \$1.1 billion to the U.S. Treasury since 1995, a substantial step towards eliminating the helium debt, which the HPA froze at approximately \$1.3 billion. During FY 2011, \$210 million was paid toward the helium debt from reserve sales. The BLM anticipates full repayment of the helium debt in FY 2013. According to the HPA, once the helium debt is retired, the Helium Fund (used to fund the BLM's helium program operational expenses) would be dissolved and all future receipts would be deposited directly into the general fund of the U.S. Treasury.

The BLM's current helium program, with a workforce of 51 full-time equivalents (FTE), 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 is responsible for administering helium extracted from Federal resources, including management of fees and royalty contracts. These operations are not limited to the Hugoton gas field, but also occur in fields in Colorado, Wyoming, Utah, and any other state where producers extract helium from the Federal mineral estate. Additionally, the BLM is responsible for administering the sell-off of crude helium to private refiners. These sales make the most significant contributions toward paying off the helium debt. The agency also conducts domestic and, to a lesser extent, international helium resource evaluation and reserve tracking to determine the extent of available helium resources.

Another major part of BLM's helium program is the "In-Kind" program, which supplies helium to Federal agencies (e.g., the Department of Energy and NASA) for operations and/or research. Before the Helium Privatization Act, Congress required Federal agencies to purchase their helium supplies from the Bureau of Mines. Under the current In-Kind program, Federal agencies purchase all of their refined helium from private suppliers who, in turn, are required to purchase an equivalent amount of crude helium from the Federal Helium Reserve. In 2011, Federal agencies purchased \$11 million of helium through the In-Kind program, up slightly from \$10.8 million in 2010.

The National Academy of Sciences Reports

In 2000, the NAS published its first analysis of the impacts of the HPA. Its general finding was that the Act would not have an impact on helium users. Additionally, the NAS report concluded that because the price-setting mechanism was based on the amount of the helium debt, and not the market for helium, the government's significantly higher price would mean the helium refining industry would buy crude helium from the BLM only as a last resort for fulfilling private contracts. However, private helium refiners would still be required to purchase crude helium from the BLM under the In-Kind program.

Over the course of the last decade, however, it has become apparent that assumptions underlying the 2000 NAS Report were not accurate. First, the NAS's assumption that "[t]he price of helium [would] probably remain stable through at least 2010" has proven faulty. The market for helium has seen significant fluctuations on both the demand side—which dropped significantly in 2008 after peaking the prior year—and on the supply side, which experienced a significant decline in private supplies between 2006 and 2008. In the face of this volatility, prices for helium rose steadily over the course of the decade. By 2008, the market price for helium began to hover near the BLM's price, leading to greater withdrawals from the Federal Reserve than the 2000 NAS Report anticipated.

Another market impact that the 2000 NAS Report did not address was international supply and demand for helium. According to the U.S. Department of Commerce, domestic consumption of helium decreased 2.7 percent per year from 2000-2007, while exports to the Pacific Rim grew 6.8 percent annually, exceeding the 5.1 percent growth rate in Europe. The international market

also experienced supply issues because of refining capacity problems at plants in Qatar and Algeria, which would normally help supply both Europe and Asia.

In early 2010, the NAS released a follow-up report on the BLM's management of the Helium Reserve. The report, entitled "Selling the Nation's Helium Reserve," focused on "whether the interests of the United States have been well served by the [HPA] and, in particular, whether selling off the helium reserve has had any adverse effect on U.S. scientific, technical, biomedical, and national security users of helium."

The 2010 NAS report, which identified some shortcomings of the 2000 report, takes a markedly different tone than the 2000 report. This change in approach reflects the volatility of the helium market over the last decade. The NAS report analyzes the relationship between supply and demand for helium on a domestic and international basis, as well as the BLM's management of the Federal Helium Reserve under the HPA. The report concludes that the HPA mandated sell-off is negatively impacting the needs of both current and future users of helium in the United States. This conclusion is the driving force behind a series of recommendations in the report directed at the BLM and the United States Congress.

S. 2374, the Helium Stewardship Act of 2012

S. 2374 addresses many of the concerns that the 2010 NAS report identified regarding the Federal government's involvement in the helium market. Most importantly, the bill would create a set of phased authorities for the BLM's management of the Helium Reserve, establishing a "glide path" from the sales mandated under the HPA to a scenario where 3 billion scf of helium would be reserved solely for Federal users. This would accomplish the original goals of the HPA—the exit of the Federal government from the broader helium market and the paying off of the helium debt—while protecting long-term supply interests for the Federal government. The Department supports this approach to gradually scale back the Federal helium program.

The bill stipulates three phases to the drawdown: 1) "Business as Usual;" 2) "Maximizing Total Recovery of Helium;" and 3) "Access for Federal Users." The first phase would begin on the bill's date of enactment and end upon repayment of the helium debt. During this period, the BLM would be required to offer for sale, on an annual basis, at least as much helium as was offered for sale during FY 2012. The second phase would begin upon repayment of the helium debt and end when the volume of recoverable crude helium in the Federal Helium Reserve reaches 3 billion scf. Throughout this time, the BLM would balance factors involving long-term helium recovery, program management, market supply and demand, and demand of Federal users when determining the annual quantity of helium to offer for sale. The third phase would begin when the volume of recoverable crude helium in the Federal Helium Reserve reaches 3 billion scf and presumably last until all recoverable helium has been exhausted from the reserve. Once this phase begins, only Federal agencies and Federal research grant holders would be authorized to purchase helium from the reserve.

During the first two phases, the bill would require the Secretary to consult with the helium industry to determine quantities, dates, and conditions for sales of helium. The legislation, however, is silent on how this consultation would take place. The Department would like to

work with the sponsor and the Committee on clarifying how the consultation process would occur.

Also under the bill, in order to establish a fair market price for crude helium, the Secretary would require all entities that are party to a contract with the Secretary for the acceptance, storage, and redelivery of crude helium to disclose the weighted average price for all their crude and bulk liquid helium transactions throughout the entire year. The legislation provides for the strict confidentiality of these numbers. However, while the confidentiality of the individual parties would be maintained, the ultimate result would still be a published price for crude helium. It has been one of the unintended consequences of the Helium Privatization Act that the BLM's published price for crude helium evolved into a market benchmark for the global price of helium. A key recommendation of the NAS report and the position of the Administration is that the drawdown of the Federal Helium Reserve should be done in such a way that it encourages market-based solutions to finding and developing additional helium resources. The Department looks forward to discussing this issue further with the sponsor and the Committee. The Administration continues to evaluate any cost implications of this legislation.

In addition to provisions relating to the sale of crude helium, the bill would require the U.S. Geological Survey (USGS) to complete several reports and studies on helium, including national and global helium gas resource assessments. The Department would like to work with the sponsor and the Committee to address technical details regarding the assessments. It would also direct the Department of Energy to support research and development activities related to low-Btu gas separation and helium conservation. The Department of the Interior defers to the Department of Energy regarding the provisions of the bill pertaining to Department of Energy research and development.

Soda Ash Royalty Extension

S. 2374 also extends for 2 years the royalty rate reduction provided for under the Soda Ash Royalty Rate Reduction Act of 2006, which expired in October 2011. This would apply an across-the-board reduction in the royalty rate on soda ash leases from an average of 5.6 percent to 2 percent. The Department does not support this provision of the bill.

As mandated by the 2006 Act, the BLM reported to Congress in the fall on the impact of the reduction over the previous 5 years, in the *U.S. Department of the Interior Report to Congress: The Soda Ash Royalty Reduction Act of 2006*. The report found that the Soda Ash Royalty Reduction Act of 2006 resulted in a substantial loss of royalty revenues to the Federal Government and the states which exceeded Congressional estimates at the time of enactment. The royalty rate reduction does not appear to have contributed in a significant way to the creation of new jobs within the industry, to increased exports, or to a notable increase in capital expenditures to enhance production. In addition, the royalty rate reduction appears to have influenced a shift of production away from state leases and private lands and onto Federal leases.

The report also found that, with regard to global competitiveness, U.S. production has remained stable at around 11 million tons since 2002, with exports stable at around 5 million tons since 2005. U.S. exports continue to account for over 40 percent of total world exports. In contrast,

China's production has doubled since 2002, from approximately 10 million to approximately 20 million tons, while Chinese exports remain far below U.S. exports. Since 2002, world-wide production has risen from 37 million tons to 48 million tons in 2010.

Finally, the report found that overall domestic employment has not increased since passage of the Act. However, it is not readily apparent from the available data whether jobs have been maintained due to the royalty rate reduction in the face of the global economic downturn. Any analysis of the number of jobs maintained during the royalty reduction period is highly uncertain; employment levels in the industry depend on a number of factors, such as soda ash market conditions and employee productivity.

Conclusion

Thank you for the opportunity to present testimony on S. 2374. I would be happy to answer any questions the Committee may have.