

HELIUM EXTRACTION ACT OF 2017

OCTOBER 23, 2017.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. BISHOP of Utah, from the Committee on Natural Resources, submitted the following

R E P O R T

[To accompany H.R. 3279]

[Including cost estimate of the Congressional Budget Office]

The Committee on Natural Resources, to whom was referred the bill (H.R. 3279) to amend the Mineral Leasing Act to provide that extraction of helium from gas produced under a Federal mineral lease shall maintain the lease as if the helium were oil and gas, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

PURPOSE OF THE BILL

The purpose of H.R. 3279 is to amend the Mineral Leasing Act to provide that the extraction of helium from gas produced under a Federal mineral lease shall maintain the lease as if the helium were oil and gas.

BACKGROUND AND NEED FOR LEGISLATION

H.R. 3279, the Helium Extraction Act of 2017, amends the Mineral Leasing Act (30 U.S.C. 181 et seq.) to allow helium extraction from gas on federal lands under the same lease terms as oil and gas. The impending closure of the Bureau of Land Management's Federal Helium Reserve in 2021 threatens the stability of the domestic helium market. H.R. 3279 works to alleviate some of these supply concerns by facilitating the production of helium on federal lands, while simultaneously providing a fair return to the taxpayer.

Refined helium continues to serve as an essential component of America's economy, particularly in the fields of medicine, science, and defense. Liquefying at the ultra-low temperature of 4.2 °K (−452 °F), helium's unique properties as a coolant and nonreactive,

nonflammable gas make it irreplaceable in these and other industries.

Historically, much of the American demand for helium has been satisfied by the Federal Helium Reserve. First developed in 1926 to keep up with global advancements in military technologies, the Federal Helium Reserve is maintained by a reservoir and pipeline system spanning Oklahoma, Kansas and the panhandle of Texas. The Bureau of Land Management (BLM) estimates that the Reserve provides enough helium to meet more than 40 percent of domestic demand for the gas.

In 2013, Congress passed the Helium Stewardship Act (HSA, Public Law 113–40) with broad bipartisan support, thus avoiding a closure of the Reserve and the immense market shortages that would have followed. The HSA presented a competitive, free market approach to sell off the remaining helium in the Federal Reserve, such that by fiscal year 2021, all helium would be auctioned by BLM to interested buyers.

Acknowledging the vital role of helium in our space, defense and medical research and development endeavors, one of the principal aims of the HSA was to ensure continued access to federal helium users at a fair price, including federal grant recipients. The Natural Resources Committee bill report on the HSA articulated this intention, directing a portion of helium be preserved for federal use “when the remaining Reserve volume equals 3 billion cubic feet,” and continuing “until the recoverable helium in the reserve is expended.” H. Report 113–42.

Unfortunately, major concerns remain regarding the future of our domestic helium supply. BLM has interpreted the HSA to mean that it should sell off the Federal Helium Reserve in its entirety, including the 3 billion cubic feet designated for federal users. The helium supply for researchers is already in a state of crisis, with end-user prices for helium increasing by as much as 250 percent in the last six years. And as the single largest producer of helium in the world, uncertainty in the American market could have far-reaching impacts on global supply as well.

Not providing land leases for federal helium production would deprive the United States a supply of this precious, natural commodity and a significant revenue source for taxpayers. H.R. 3279 would help secure our domestic helium supply for years into the future.

Although helium is one of the most abundant elements in the universe, it is rare on earth, formed in the earth’s crust by the decay of radioactive elements. Helium is typically a byproduct of the natural gas extraction process. To be viewed as economically viable for extraction, helium must have a concentration of more than 0.3 percent or higher in natural gas, and some helium-rich natural gas reserves can contain up to 8 percent helium. When it is not considered economically or logistically feasible to extract and store crude helium for later purification, it may simply be vented into the atmosphere.

The value of helium has changed over time, and varies significantly depending on whether it is supplied by the government or by private industry. In the private sector, Grade-A helium (99.997% purity or better) extracted in 2016 was estimated at a value of \$650 million. Approximate domestic consumption of Grade-

A helium in 2016 was 1.7 billion cubic feet and its primary uses can be broken down as follows: 30% for magnetic resonance imaging; 17% as a lifting gas; 14% for analytical and laboratory applications; 9% for welding; 6% for engineering and scientific applications; 5% each toward both leak detection and semiconductor manufacturing; and 14% for other applications.

The privatization process outlined in the HSA continued in 2016, with BLM conducting its third helium auction. This yielded an average price to private users of \$104 per thousand cubic feet. Total sales generated almost \$43 million in revenue.

The United States Geological Survey (USGS) estimates that international helium extraction plants will become the main source for global helium buyers by the end of the decade, with seven international facilities currently in operation and others planned over the next three to five years. However, the recent political and diplomatic turmoil involving Qatar may cast into question the ability of the world's second-largest producer to provide a stable supply of helium to the market.

Today, the United States leads the world in helium supply, with the most recent USGS data estimating total resources and reserves to be 744 billion cubic feet. The volume of helium in the rest of the world is approximated at 1.13 trillion cubic feet. The largest three suppliers after the United States are Qatar (357 billion cubic feet), Algeria (290 billion cubic feet), and Russia (240 billion cubic feet).

An increased reliance on foreign nations for helium could be of particular concern, considering the national security challenges that exist between the United States and the three largest foreign suppliers.

The complexity of the issue has become even clearer in recent months. Beginning in early June, Saudi Arabia and its regional allies broke off economic and diplomatic relations with Qatar, accusing Qatar of sponsoring terrorism and enabling Islamist movements such as the Muslim Brotherhood. The nation was systematically isolated by its neighbors, with air, land and sea routes cut off and sanctions levied by multiple countries including Egypt, the United Arab Emirates and Bahrain. A regional crisis on multiple fronts, this geopolitical struggle may have major implications on American foreign policy in the Middle East, as American allies in the fight against ISIS have landed on opposing sides of the conflict.

The ultimate effects of Qatar's diplomatic crisis and its impact on America's relationship with its allies may not be apparent for some time. Suffice it to say, the regional turmoil and the functional isolation of the world's second largest helium producer is one concern among a plethora of complications. Qatar supplied 95 percent of U.S. helium imports over the 2012–2015 period. Also troubling is, as of June 13, 2017, Qatar had already closed two of its helium plants due to the rift with its neighboring states.

Another foreign source of helium is Algeria, currently the world's third largest producer. The United States is a major trading partner of Algeria, despite the U.S. State Department's acknowledgment of the necessary changes Algeria must make to achieve economic diversity and transparency. Our active trading operations notwithstanding, the 290 billion cubic feet of Algerian helium reserves would not be nearly sufficient to satisfy American users' demand for the element.

Russia also possesses a substantial helium supply. Like Algeria, however, Russia's helium resources would not be able to sustain American domestic demand, let alone global demand.

Given the vast political, economic, and diplomatic uncertainty surrounding many of the largest foreign suppliers of helium, it would be imprudent to rely on these nations to fully satisfy global demand. Past supply shortages have had drastically negative effects on the price of the product, and introducing more unpredictability into the future of helium supply has the potential to destabilize the market.

With the impending closure of the Federal Helium Reserve in 2021, and without other means for the United States government to produce its own helium, the future of the domestic and global helium markets will face ever increasing uncertainty.

Venting off helium, or otherwise not facilitating its extraction from natural gas reserves on federal lands, would be a neglectful waste of a valuable and finite natural resource. With the complete sale of the Federal Helium Reserve fast approaching, alternative routes to helium acquisition for future use, particularly for federal users, remains largely unclear.

Easing America's ability to actively extract helium on federal lands under the Helium Extraction Act of 2017 would not only help secure the future of the American helium supply, but also has the potential to be a substantial revenue source, through both land lease royalties and foreign exports to support international demand.

COMMITTEE ACTION

H.R. 3279 was introduced on July 18, 2017, by Congressman Paul Cook (R-CA). The bill was referred to the Committee on Natural Resources. Previously, the Subcommittee on Energy and Mineral Resources held a hearing on a discussion draft of the bill on June 21, 2017. On July 25, 2017, the Natural Resources Committee met to consider the bill. No amendments were offered, and the bill was ordered favorably reported to the House of Representatives by unanimous consent on July 26, 2017.

COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

Regarding clause 2(b)(1) of rule X and clause 3(c)(1) of rule XIII of the Rules of the House of Representatives, the Committee on Natural Resources' oversight findings and recommendations are reflected in the body of this report.

COMPLIANCE WITH HOUSE RULE XIII AND CONGRESSIONAL BUDGET ACT

1. Cost of Legislation and the Congressional Budget Act. With respect to the requirements of clause 3(c)(2) and (3) of rule XIII of the Rules of the House of Representatives and sections 308(a) and 402 of the Congressional Budget Act of 1974, the Committee has received the following estimate for the bill from the Director of the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, October 23, 2017.

Hon. ROB BISHOP,
*Chairman, Committee on Natural Resources,
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 3279, the Helium Extraction Act of 2017.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Jeff LaFave.

Sincerely,

KEITH HALL,
Director.

Enclosure.

H.R. 3279—Helium Extraction Act of 2017

Summary: H.R. 3279 would allow firms to retain federal oil and gas leases that would otherwise expire for the purpose of extracting helium. Based on information provided by the Bureau of Land Management (BLM) and firms operating in the mineral extraction industry, CBO estimates that enacting the bill would increase offsetting receipts, which are treated as reductions in direct spending, by \$9 million over the 2018–2027 period. Because enacting the bill would affect direct spending, pay-as-you procedures apply. Enacting the bill would not affect revenues.

CBO estimates that enacting H.R. 3279 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

H.R. 3279 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA).

Estimated cost to the Federal Government: The estimated budgetary effect of H.R. 3279 is shown in the following table. The costs of this legislation fall within budget function 300 (natural resources and environment).

	By fiscal year, in millions of dollars—												
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2018– 2022	2018– 2027	
DECREASES IN DIRECT SPENDING													
Estimated Budget Authority ..	*	-1	-1	-1	-1	-1	-1	-1	-1	-1	-4	-9	
Estimated Outlays	*	-1	-1	-1	-1	-1	-1	-1	-1	-1	-4	-9	

Note: * = between -\$500,000 and zero.

Basis of estimate: For this estimate, CBO assumes that H.R. 3279 will be enacted near the beginning of fiscal year 2018.

H.R. 3279 would allow firms to retain federal oil and gas leases beyond 10 years to extract helium. Under current law, firms enter into agreements with BLM to extract helium from active oil and gas leases. Those leases expire after 10 years if they are no longer producing commercial quantities of oil or gas, even if commercial quantities of helium are still being extracted. In recent years, BLM has granted waivers that allow firms to continue extracting helium on leases that otherwise would have expired. In 2016, royalties for helium produced on federal oil and gas leases totaled \$17 million.

All proceeds from the production of helium are deposited in the Treasury.

CBO expects that, under the bill, firms would be more likely to acquire oil and gas leases containing noncommercial quantities of hydrocarbons but high volumes of helium. Based on an analysis of information provided by firms in the mineral extraction industry, we estimate that royalties from helium production on those new leases would average about \$1 million a year. Because CBO expects that the number of firms seeking to develop such leases over the next 10 years would be small, we estimate that receipts from bonus bids for those leases would be negligible. Finally, CBO estimates that enacting H.R. 3279 would have no significant effect on production from existing leases because firms extracting helium on leases that may expire would probably obtain permission from BLM to continue their extraction of helium. In total CBO estimates that enacting H.R. 3279 would increase offsetting receipts by \$9 million over the 2018–2027 period.

Pay-As-You-Go considerations: The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays that are subject to those pay-as-you-go procedures are shown in the following table.

CBO ESTIMATE OF PAY-AS-YOU-GO EFFECTS FOR H.R. 3279 AS ORDERED REPORTED BY THE HOUSE COMMITTEE ON NATURAL RESOURCES ON JULY 26, 2017

	By fiscal year, in millions of dollars—											2018–2022	2018–2027	
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027				
NET INCREASE IN THE DEFICIT														
Statutory Pay-As-You-Go Impact	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-4	-9	

Increase in long-term direct spending and deficits: CBO also estimates that enacting H.R. 3279 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

Intergovernmental and private-sector impact: H.R. 3279 contains no intergovernmental or private-sector mandates as defined in UMRA.

Estimate prepared by: Federal costs: Jeff LaFave; Impact on State, local, and tribal governments: Jon Sperl; Impact on the private sector: Amy Petz.

Estimate approved by: H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis.

2. General Performance Goals and Objectives. As required by clause 3(c)(4) of rule XIII, the general performance goal or objective of this bill is to amend the Mineral Leasing Act to provide that the extraction of helium from gas produced under a Federal mineral lease shall maintain the lease as if the helium were oil and gas.

EARMARK STATEMENT

This bill does not contain any Congressional earmarks, limited tax benefits, or limited tariff benefits as defined under clause 9(e),

9(f), and 9(g) of rule XXI of the Rules of the House of Representatives.

COMPLIANCE WITH PUBLIC LAW 104-4

This bill contains no unfunded mandates.

COMPLIANCE WITH H. RES. 5

Directed Rule Making. This bill does not contain any directed rule makings.

Duplication of Existing Programs. This bill does not establish or reauthorize a program of the federal government known to be duplicative of another program. Such program was not included in any report from the Government Accountability Office to Congress pursuant to section 21 of Public Law 111-139 or identified in the most recent Catalog of Federal Domestic Assistance published pursuant to the Federal Program Information Act (Public Law 95-220, as amended by Public Law 98-169) as relating to other programs.

PREEMPTION OF STATE, LOCAL OR TRIBAL LAW

This bill is not intended to preempt any State, local or tribal law.

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (new matter is printed in italic and existing law in which no change is proposed is shown in roman):

MINERAL LEASING ACT

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That deposits of coal, phosphate, sodium, potassium, oil, oil shale, gilsonite (including all vein-type solid hydrocarbons), or gas, and lands containing such deposits owned by the United States, including those in national forests, but excluding lands acquired under the Act known as the Appalachian Forest Act, approved March 1, 1911 (36 Stat. 961), and those in incorporated cities, towns, and villages and in national parks and monuments, those acquired under other Acts subsequent to February 25, 1920, and lands within the naval petroleum and oil-shale reserves, except as hereinafter provided, shall be subject to disposition in the form and manner provided by this Act to citizens of the United States, or to associations of such citizens, or to any corporation organized under the laws of the United States, or of any State or Territory thereof, or in the case of coal, oil, oil shale, or gas, to municipalities. Citizens of another country, the laws, customs, or regulations of which deny similar or like privileges to citizens or corporations of this country, shall not by stock ownership, stock holding, or stock control, own any interest in any lease acquired under the provisions of this Act.

The term "oil" shall embrace all nongaseous hydrocarbon substances other than those substances leasable as coal, oil shale, or gilsonite (including all vein-type solid hydrocarbons).

The term "combined hydrocarbon lease" shall refer to a lease issued in a special tar sand area pursuant to section 17 after the date of enactment of the Combined Hydrocarbon Leasing Act of 1981.

The term "special tar sand area" means (1) an area designated by the Secretary of the Interior's orders of November 20, 1980 (45 FR 76800-76801) and January 21, 1981 (46 FR 6077-6078) as containing substantial deposits of tar sand.

The United States reserves the ownership of and the right to extract helium from all gas produced from lands leased or otherwise granted under the provisions of this Act, under such rules and regulations as shall be prescribed by the Secretary of the Interior: *Provided further*, That in the extraction of helium from gas produced from such lands it shall be so extracted as to cause no substantial delay in the delivery of gas produced from the well to the purchaser thereof, *and that extraction of helium from gas produced from such lands shall maintain the lease as if the extracted helium were oil and gas.*

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