

112TH CONGRESS  
1ST SESSION

# S. 2374

To amend the Helium Act to ensure the expedient and responsible draw-down of the Federal Helium Reserve in a manner that protects the interests of private industry, the scientific, medical, and industrial communities, commercial users, and Federal agencies, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

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Mr. BINGAMAN (for himself, Mr. BARRASSO, Mr. WYDEN, and Mr. ENZI) introduced the following bill; which was read twice and referred to the Committee on \_\_\_\_\_

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## A BILL

To amend the Helium Act to ensure the expedient and responsible draw-down of the Federal Helium Reserve in a manner that protects the interests of private industry, the scientific, medical, and industrial communities, commercial users, and Federal agencies, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Helium Stewardship  
5 Act of 2012”.

1 **SEC. 2. DEFINITIONS.**

2 Section 2 of the Helium Act (50 U.S.C. 167) is  
3 amended—

4 (1) in paragraph (1), by striking the semicolon  
5 at the end and inserting a period;

6 (2) in paragraph (2), by striking “; and” and  
7 inserting a period; and

8 (3) by adding at the end the following:

9 “(4) FEDERAL HELIUM RESERVE.—

10 “(A) IN GENERAL.—The term ‘Federal  
11 Helium Reserve’ means helium reserves owned  
12 by the United States.

13 “(B) INCLUSIONS.—The term ‘Federal He-  
14 lium Reserve’ includes—

15 “(i) the Cliffside Field helium storage  
16 reservoir;

17 “(ii) the federally owned helium pipe-  
18 line system; and

19 “(iii) all associated infrastructure  
20 owned, leased, or managed under contract  
21 by the Secretary for storage, transpor-  
22 tation, withdrawal, purification, or man-  
23 agement of helium.

24 “(5) LOW-BTU GAS.—The term ‘low-Btu gas’  
25 means a fuel gas with a heating value of less than  
26 250 Btu per standard cubic foot measured as the

1 higher heating value resulting from the inclusion of  
2 noncombustible gases, including nitrogen, helium,  
3 argon, and carbon dioxide.”.

4 **SEC. 3. SALE OF CRUDE HELIUM.**

5 Section 6 of the Helium Act (50 U.S.C. 167d) is  
6 amended to read as follows:

7 **“SEC. 6. SALE OF CRUDE HELIUM.**

8 “(a) PHASE A: BUSINESS AS USUAL.—

9 “(1) IN GENERAL.—Subject to paragraph (2),  
10 the Secretary may offer for sale crude helium for  
11 Federal, medical, scientific, and commercial uses in  
12 such quantities, at such times, and under such con-  
13 ditions as the Secretary, in consultation with the he-  
14 lium industry, determines necessary to carry out this  
15 subsection with minimum market disruption.

16 “(2) MINIMUM QUANTITY.—The Secretary shall  
17 offer for sale during each fiscal year under para-  
18 graph (1) a quantity of crude helium that is not less  
19 than the quantity of crude helium offered for sale by  
20 the Secretary during fiscal year 2012.

21 “(3) PURCHASE BY FEDERAL AGENCIES.—Fed-  
22 eral agencies, and extramural holders of 1 or more  
23 Federal research grants, may purchase refined he-  
24 lium under this subsection for Federal, medical, and  
25 scientific uses from persons who have entered into

1 enforceable contracts to purchase an equivalent  
2 quantity of crude helium from the Secretary.

3 “(4) DURATION.—This subsection applies dur-  
4 ing the period—

5 “(A) beginning on the date of enactment of  
6 the Helium Stewardship Act of 2012; and

7 “(B) ending on the date on which all  
8 amounts required to be repaid to the United  
9 States under this Act as of October 1, 1995,  
10 are repaid in full.

11 “(b) PHASE B: MAXIMIZING TOTAL RECOVERY OF  
12 HELIUM.—

13 “(1) IN GENERAL.—The Secretary may offer  
14 for sale crude helium for Federal, medical, scientific,  
15 and commercial uses in such quantities, at such  
16 times, and under such conditions as the Secretary,  
17 in consultation with the helium industry, determines  
18 necessary—

19 “(A) to maximize total recovery of helium  
20 from the Federal Helium Reserve over the long  
21 term;

22 “(B) to manage crude helium sales accord-  
23 ing to the ability of the Secretary to extract and  
24 produce helium from the Federal Helium Re-  
25 serve;

1           “(C) to respond to helium market supply  
2 and demand;

3           “(D) to give priority to meeting the helium  
4 demand of Federal users in event of any disrup-  
5 tion to the Federal Helium Reserve; and

6           “(E) to carry out this subsection.

7           “(2) PURCHASE BY FEDERAL AGENCIES.—Fed-  
8 eral agencies, and extramural holders of 1 or more  
9 Federal research grants, may purchase refined he-  
10 lium under this subsection for Federal, medical, and  
11 scientific uses from persons who have entered into  
12 enforceable contracts to purchase an equivalent  
13 quantity of crude helium from the Secretary.

14           “(3) DURATION.—This subsection applies dur-  
15 ing the period—

16           “(A) beginning on the day after the date  
17 described in subsection (a)(4)(B); and

18           “(B) ending on the date on which the vol-  
19 ume of recoverable crude helium at the Federal  
20 Helium Reserve (other than privately owned  
21 quantities of crude helium stored temporarily at  
22 the Federal Helium Reserve under section 5  
23 and this section) is 3,000,000,000 standard  
24 cubic feet.

25           “(c) PHASE C: ACCESS FOR FEDERAL USERS.—

1           “(1) IN GENERAL.—The Secretary may offer  
2 for sale crude helium for Federal uses (including  
3 medical and scientific uses) in such quantities, at  
4 such times, and under such conditions as the Sec-  
5 retary determines necessary to carry out this sub-  
6 section.

7           “(2) PURCHASE BY FEDERAL AGENCIES.—Fed-  
8 eral agencies, and extramural holders of 1 or more  
9 Federal research grants, may purchase refined he-  
10 lium under this subsection for Federal uses (includ-  
11 ing medical and scientific uses) from persons who  
12 have entered into enforceable contracts to purchase  
13 an equivalent quantity of crude helium from the Sec-  
14 retary.

15           “(3) EFFECTIVE DATE.—This subsection ap-  
16 plies beginning on the day after the date described  
17 in subsection (b)(3)(B).

18           “(d) PRICES AND DETERMINATIONS.—

19           “(1) IN GENERAL.—Sales of crude helium by  
20 the Secretary shall be at prices established by the  
21 Secretary that approximate the crude helium price  
22 in the private market as of the date of the offer for  
23 sale.

1           “(2) DETERMINATION OF SALE PRICE.—The  
2 Secretary may make a determination of the prices  
3 described in paragraph (1) using—

4           “(A) a confidential survey of qualifying do-  
5 mestic helium sourcing transactions to which  
6 any holder of a contract with the Secretary for  
7 the acceptance, storage, and redelivery of crude  
8 helium in the Cliffside Field helium storage res-  
9 ervoir is a party;

10           “(B) current market crude helium prices  
11 inferred from any amount received by the Sec-  
12 retary from the sale or disposition of helium on  
13 Federal land under subsection (f); and

14           “(C) in consultation with the helium indus-  
15 try, the volume-weighted average cost among  
16 helium refiners, producers, and liquefiers, in  
17 dollars per thousand cubic feet, of converting  
18 gaseous crude helium into bulk liquid helium.

19           “(3) AUTHORITY OF SECRETARY.—The Sec-  
20 retary shall require all persons or entities that are  
21 parties to a contract with the Secretary for the ac-  
22 ceptance, storage, and redelivery of crude helium to  
23 disclose, on a strictly confidential basis in dollars per  
24 thousand cubic feet, the weighted average price of all  
25 crude helium and bulk liquid helium purchased or

1 processed by the persons in all qualifying domestic  
2 helium sourcing transactions during the fiscal year.

3 “(4) QUALIFYING DOMESTIC HELIUM SOURCING  
4 TRANSACTIONS.—

5 “(A) IN GENERAL.—In establishing the  
6 prices described in paragraph (1), the Secretary  
7 shall consider subparagraphs (B) and (C) to en-  
8 sure a reasonable number of transactions.

9 “(B) INCLUSIONS.—For the purposes of  
10 this subsection, qualifying domestic helium  
11 sourcing transactions include any new agree-  
12 ment in the United States for the purchase of  
13 at least 20,000,000 standard cubic feet of crude  
14 helium or liquid helium in the fiscal year in  
15 which the Secretary collects the data.

16 “(C) EXCLUSIONS.—For the purposes of  
17 this subsection, qualifying domestic helium  
18 sourcing transactions do not include—

19 “(i) purchases of crude helium from  
20 the Secretary; or

21 “(ii) transactions at prices indexed to  
22 the posted crude helium price of the Sec-  
23 retary.

24 “(5) USE OF INFORMATION.—The Secretary  
25 may use the information gathered under this sub-



1 section to approximate the current fair market price  
2 for crude helium to ensure recovery of fair value for  
3 the taxpayers of the United States from sales of  
4 crude helium.

5 “(6) PROTECTION OF CONFIDENTIALITY.—The  
6 Secretary shall adopt such administrative policies  
7 and procedures that the Secretary considers nec-  
8 essary and reasonable to ensure robust protection of  
9 the confidentiality of data submitted by private per-  
10 sons.

11 “(e) HELIUM PRODUCTION FUND.—

12 “(1) IN GENERAL.—All amounts received under  
13 this Act, including amounts from the sale of crude  
14 helium, shall be credited to the Helium Production  
15 Fund, which shall be available without fiscal year  
16 limitation for purposes considered necessary by the  
17 Secretary to carry out this subsection.

18 “(2) CAPITAL INVESTMENTS AND MAINTENANCE.—The Secretary may use funds credited to  
19 the Helium Production Fund to fund capital invest-  
20 ments in upgrades and maintenance at the Federal  
21 Helium Reserve, including—

22 “(A) well head maintenance at the Cliff-  
23 side Field helium storage reservoir;  
24

1           “(B) capital investments in maintenance  
2           and upgrades of facilities that pressurize the  
3           Cliffside Field helium storage reservoir;

4           “(C) capital investments in maintenance  
5           and upgrades of equipment related to the stor-  
6           age, withdrawal, transportation, purification,  
7           and sale of crude helium at the Cliffside Field  
8           helium storage reservoir; and

9           “(D) any other scheduled or unscheduled  
10          maintenance of the Cliffside Field helium stor-  
11          age reservoir and helium pipeline.

12          “(3) EXCESS FUNDS.—Any amounts in the  
13          Fund described in paragraph (1) that exceed the  
14          amounts that the Secretary determines to be nec-  
15          essary to carry out paragraph (1) and any contracts  
16          negotiated under this Act shall be paid to the Treas-  
17          ury and credited against the amounts required to be  
18          repaid to the Treasury under subsection (a).

19          “(f) EXTRACTION OF HELIUM FROM DEPOSITS ON  
20          FEDERAL LAND.—All amounts received by the Secretary  
21          from the sale or disposition of helium on Federal land  
22          shall be paid to the Treasury and credited against the  
23          amounts required to be repaid to the Treasury under sub-  
24          section (a).”.

1 **SEC. 4. HELIUM RESOURCE ASSESSMENT, CONSERVATION**  
2 **RESEARCH, AND HELIUM-3 SEPARATION.**

3 The Helium Act is amended by striking section 15  
4 (50 U.S.C. 167m) and inserting the following:

5 **“SEC. 15. HELIUM GAS RESOURCE ASSESSMENT.**

6 “Not later than 2 years after the date of enactment  
7 of the Helium Stewardship Act of 2012, the Secretary,  
8 acting through the Director of the United States Geologi-  
9 cal Survey, shall—

10 “(1) in coordination with appropriate heads of  
11 State geological surveys—

12 “(A) complete a national helium gas as-  
13 sessment that identifies and quantifies the  
14 quantity of helium, including the isotope he-  
15 lium-3, in each reservoir, including assessments  
16 of the constituent gases found in each helium  
17 resource, such as carbon dioxide, nitrogen, and  
18 natural gas; and

19 “(B) make available the modern seismic  
20 and geophysical log data for characterization of  
21 the Bush Dome Reservoir;

22 “(2) in coordination with appropriate inter-  
23 national agencies and the global geology community,  
24 complete a global helium gas assessment that identi-  
25 fies and quantifies the quantity of the helium, in-  
26 cluding the isotope helium-3, in each reservoir;

1           “(3) in coordination with the Secretary of En-  
2           ergy, acting through the Administrator of the En-  
3           ergy Information Administration, complete—

4                   “(A) an assessment of trends in global de-  
5                   mand for helium, including the isotope helium-  
6                   3;

7                   “(B) a 10-year forecast of domestic de-  
8                   mand for helium across all sectors, including  
9                   scientific and medical research, manufacturing,  
10                  space technologies, cryogenics, and national de-  
11                  fense; and

12                  “(C) an inventory of medical, scientific, in-  
13                  dustrial, commercial, and other uses of helium  
14                  in the United States, including Federal and  
15                  commercial helium uses, that identifies the na-  
16                  ture of the helium use, the amounts required,  
17                  the technical and commercial viability of helium  
18                  recapture and recycling in that use, and the  
19                  availability of material substitutes wherever  
20                  possible; and

21           “(4) submit to the Committee on Energy and  
22           Natural Resources of the Senate and the Committee  
23           on Natural Resources of the House of Representa-  
24           tives a report describing the results of the assess-  
25           ments required under this paragraph.

1 **“SEC. 16. LOW-BTU GAS SEPARATION AND HELIUM CON-**  
2 **SERVATION RESEARCH AND DEVELOPMENT.**

3 “(a) AUTHORIZATION.—The Secretary of Energy  
4 shall support programs of research, development, commer-  
5 cial application, and conservation (including the programs  
6 described in subsection (b))—

7 “(1) to expand the domestic production of low-  
8 Btu gas and helium resources;

9 “(2) to separate and capture helium from nat-  
10 ural gas streams at the wellhead; and

11 “(3) to reduce the venting of helium and he-  
12 lium-bearing low-Btu gas during natural gas explo-  
13 ration and production.

14 “(b) PROGRAMS.—

15 “(1) MEMBRANE TECHNOLOGY RESEARCH.—  
16 The Secretary of Energy, in consultation with other  
17 appropriate agencies, shall support a civilian re-  
18 search program to develop advanced membrane tech-  
19 nology that is used in the separation of low-Btu  
20 gases, including technologies that remove helium and  
21 other constituent gases that lower the Btu content  
22 of natural gas.

23 “(2) HELIUM SEPARATION TECHNOLOGY.—The  
24 Secretary of Energy shall support a research pro-  
25 gram to develop technologies for separating, gath-  
26 ering, and processing helium in low concentrations

1 that occur naturally in geological reservoirs or for-  
2 mations, including—

3 “(A) low-Btu gas production streams; and

4 “(B) technologies that minimize the atmos-  
5 pheric venting of helium gas during natural gas  
6 production.

7 “(3) INDUSTRIAL HELIUM PROGRAM.—The Sec-  
8 retary of Energy, working through the Industrial  
9 Technologies Program of the Department of Energy,  
10 shall carry out a research program—

11 “(A) to develop low-cost technologies and  
12 technology systems for recycling, reprocessing,  
13 and reusing helium; and

14 “(B) to develop industrial gathering tech-  
15 nologies to capture helium from other chemical  
16 processing, including ammonia processing.

17 **“SEC. 17. HELIUM-3 SEPARATION.**

18 “(a) INTERAGENCY COOPERATION.—The Secretary  
19 shall cooperate with the Secretary of Energy, or a des-  
20 ignee, on any assessment or research relating to the ex-  
21 traction and refining of the isotope helium-3 from crude  
22 helium at the Federal Helium Reserve or along the helium  
23 pipeline system, including—

24 “(1) gas analysis;

25 “(2) infrastructure studies; and

1           “(3) cooperation with private helium refiners.

2           “(b) FEASIBILITY STUDY.—The Secretary, in con-  
3 sultation with the Secretary of Energy, or a designee, may  
4 carry out a study to assess the feasibility of establishing  
5 a facility to separate the isotope helium-3 from crude he-  
6 lium at—

7           “(1) the Federal Helium Reserve; or

8           “(2) an existing helium separation or purifi-  
9 cation facility connected to the helium pipeline sys-  
10 tem.

11          “(c) REPORT.—Not later than 1 year after the date  
12 of enactment of the Helium Stewardship Act of 2012, the  
13 Secretary shall submit to the Committee on Energy and  
14 Natural Resources of the Senate and the Committee on  
15 Natural Resources of the House of Representatives a re-  
16 port that contains a description of the results of the as-  
17 sessments conducted under this section.”.

18 **SEC. 5. MISCELLANEOUS.**

19          Section 102 of the Soda Ash Royalty Reduction Act  
20 of 2006 (30 U.S.C. 262 note; Public Law 109–338) is  
21 amended by striking “5-year” and inserting “7-year”.