

112TH CONGRESS  
1ST SESSION

# H. R. 2260

To provide for a study by the National Academy of Engineering regarding improving the accuracy of collection of royalties on production of oil, condensate, and natural gas under leases of Federal lands and Indian lands, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JUNE 21, 2011

Mrs. MALONEY (for herself, Mr. HINCHEY, and Mr. GRIJALVA) introduced the following bill; which was referred to the Committee on Natural Resources

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## A BILL

To provide for a study by the National Academy of Engineering regarding improving the accuracy of collection of royalties on production of oil, condensate, and natural gas under leases of Federal lands and Indian lands, 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 “Study of Ways to Im-  
5 prove the Accuracy of the Collection of Federal Oil, Con-  
6 densate, and Natural Gas Royalties Act of 2011”.

1 **SEC. 2. STUDY OF ACTIONS TO IMPROVE THE ACCURACY**  
2 **OF COLLECTION OF FEDERAL OIL, CONDEN-**  
3 **SATE, AND NATURAL GAS ROYALTIES.**

4 The Secretary of the Interior shall seek to enter into  
5 an arrangement with the National Academy of Engineer-  
6 ing under which the Academy, by not later than six  
7 months after the date of the enactment of this Act, shall  
8 study and report to the Secretary regarding whether the  
9 accuracy of collection of royalties on production of oil, con-  
10 densate, and natural gas under leases of Federal lands (in-  
11 cluding submerged and deep water lands) and Indian  
12 lands would be improved by any of the following:

13 (1) Requiring the installation of digital meters,  
14 calibrated at least monthly to an absolute zero value,  
15 for all lands from which natural gas (including con-  
16 densate) is produced under such leases.

17 (2) Requiring that—

18 (A) the size of every orifice plate on each  
19 natural gas well operated under such leases be  
20 inspected at least quarterly by the Secretary;  
21 and

22 (B) chipped orifice plates and wrong-sized  
23 orifice plates be replaced immediately after  
24 those inspections and reported to the Secretary  
25 for retroactive volume measurement corrections

1           and royalty payments with interest of 8 percent  
2           compounded monthly.

3           (3) Requiring that any plug valves that are in  
4           natural gas gathering lines be removed and replaced  
5           with ball valves.

6           (4) Requiring that—

7                 (A) all meter runs should be opened for in-  
8                 spection by the Secretary and the producer at  
9                 all times; and

10                (B) any welding or closing of the meter  
11                runs leading to the orifice plates should be pro-  
12                hibited unless authorized by the Secretary.

13           (5) Requiring the installation of straightening  
14           vanes approximately 10 feet before natural gas en-  
15           ters each orifice meter, including each master meter  
16           and each sales meter.

17           (6) Requiring that all master meters be in-  
18           spected and the results of such inspections be made  
19           available to the Secretary and the producers imme-  
20           diately.

21           (7) Requiring that—

22                 (A) all sampling of natural gas for heating  
23                 content analysis be performed monthly up-  
24                 stream of each natural gas meter, including up-  
25                 stream of each master meter;

1 (B) records of such sampling and heating  
2 content analysis be maintained by the pur-  
3 chaser and made available to the Secretary and  
4 to the producer monthly;

5 (C) probes for such upstream sampling be  
6 installed upstream within three feet of each  
7 natural gas meter;

8 (D) any oil and natural gas lease for which  
9 heat content analysis is falsified shall be subject  
10 to cancellation;

11 (E) natural gas sampling probes be lo-  
12 cated—

13 (i) upstream of the natural gas meter  
14 at all times;

15 (ii) within a few feet of the natural  
16 gas meter; and

17 (iii) after the natural gas goes  
18 through a Welker or Y-Z vanishing cham-  
19 ber; and

20 (F) temperature probes and testing probes  
21 be located between the natural gas sampling  
22 probe and the orifice of the natural gas meter.

23 (8)(A) Reinstating the requirement to file Fed-  
24 eral Energy Regulatory Commission (FERC) Form  
25 16 in April and September of each year for every

1 natural gas pipeline, including each intrastate pipe-  
2 lines, in addition to the filing of FERC Form 2.

3 (B) Requiring—

4 (i) use of such FERC Form 2 to create  
5 FERC Form 16 data for the years beginning  
6 April and September, respectively, 1992, and  
7 for each year thereafter; and

8 (ii) filing with the Federal Energy Regu-  
9 latory Commission a FERC Form 16 for April  
10 and September that is completed with such  
11 data back to April 1992.

12 (9) Requiring that administrative jurisdiction  
13 over all natural gas gathering lines, interstate pipe-  
14 lines, and intrastate pipelines revert immediately to  
15 the Federal Energy Regulatory Commission.

16 (10) Prohibiting the dilution of natural gas  
17 with inert nitrogen or inert carbon dioxide gas for  
18 royalty determination, sale, or resale at any point.

19 (11) Requiring that both the measurement of  
20 the volume of natural gas and the heating content  
21 analyses be reported only on the basis of 14.73 PSI  
22 and 60 degrees Fahrenheit, regardless of the ele-  
23 vation above sea level of such volume measurement  
24 and heating content analysis, for both purchases and  
25 sales of natural gas.

1           (12) Prohibiting the construction of bypass  
2 pipes that go around the natural gas meter, and im-  
3 posing criminal penalties for any such construction  
4 or subsequent removal including, but not limited to,  
5 automatic cancellation of the lease.

6           (13) Requiring that all natural gas sold to con-  
7 sumers have a minimum BTU content of 960 at an  
8 atmospheric pressure of 14.73 PSI and be at a tem-  
9 perature of 60 degrees Fahrenheit, as required by  
10 the State of Wyoming Public Utilities Commission.

11           (14) Requiring that all natural gas sold in the  
12 USA will be on a MMBTU basis with the BTU con-  
13 tent adjusted for elevation above sea level in higher  
14 altitudes. Thus all natural gas meters must correct  
15 for BTU content in higher elevations (altitudes).

16           (15) Issuance by the Secretary of rules for the  
17 measurement at the wellhead of the standard volume  
18 of natural gas produced, based on independent in-  
19 dustry standards such as those suggested by the  
20 American Society of Testing Materials (ASTM).

21           (16) Requiring use of the fundamental orifice  
22 meter mass flow equation, as revised in 1990, for  
23 calculating the standard volume of natural gas pro-  
24 duced.

1           (17) Requiring the use of Fpv in standard vol-  
2           ume measurement computations as described in the  
3           1992 American Gas Association Report No. 8 enti-  
4           tled Compressibility Factor of Natural Gas and  
5           Other Related Hydrocarbon Gases.

6           (18) Requiring that gathering lines must be  
7           constructed so as to have as few angles and turns  
8           as possible, with a maximum of three angles, before  
9           they connect with the natural gas meter.

10          (19) Requiring that for purposes of reporting  
11          the royalty value of natural gas, condensate, oil, and  
12          associated natural gases, such royalty value must be  
13          based upon the natural gas's, condensate's, oil's, and  
14          associated natural gases' arm's length, independent  
15          market value, as reported in independent, respected  
16          market reports such as Platts or Bloomborgs, and  
17          not based upon industry-controlled posted prices.

18          (20) Requiring that royalties be paid on all the  
19          condensate recovered through purging gathering  
20          lines and pipelines with a cone-shaped device to push  
21          out condensate (popularly referred to as a pig) and  
22          on condensate recovered from separators, dehydra-  
23          tors, and processing plants.

24          (21) Requiring that all royalty deductions for  
25          dehydration, treating, natural gas gathering, com-

1       pression, transportation, marketing, removal of im-  
2       purities such as carbon dioxide (CO<sub>2</sub>), nitrogen (N<sub>2</sub>),  
3       hydrogen sulphide (H<sub>2</sub>S), mercaptain (HS), helium  
4       (He), and other similar charges on natural gas, con-  
5       densate, and oil produced under such leases that are  
6       now in existence be eliminated.

7               (22) Requiring that at all times—

8                       (A) the quantity, quality, and value ob-  
9                       tained for natural gas liquids (condensate) be  
10                      reported to the Secretary; and

11                     (B) such reported value be based on fair  
12                     independent arm's length market value.

13               (23) Issuance by the Secretary of regulations  
14       that prohibit venting or flaring (or both) of natural  
15       gas in cases for which technology exists to reason-  
16       ably prevent it, strict enforcement of such prohibi-  
17       tions, and cancellation of leases for violations.

18               (24) Requiring lessees to pay full royalties on  
19       any natural gas that is vented, flared, or otherwise  
20       avoidably lost.

21               (25)(A) Requiring payment of royalties on car-  
22       bon dioxide at the wellhead used for tertiary oil re-  
23       covery from depleted oil fields on the basis of 5 per-  
24       cent of the West Texas Intermediate crude oil fair



1 market price to be used for one MCF (1,000 cubic  
2 feet) of carbon dioxide gas.

3 (B) Requiring that—

4 (i) carbon dioxide used for edible purposes  
5 should be subjected to a royalty per thousand  
6 cubic feet (MCF) on the basis of the sales price  
7 at the downstream delivery point without de-  
8 ducting for removal of impurities, processing,  
9 transportation, and marketing costs;

10 (ii) such price to apply with respect to gas-  
11 eous forms, liquid forms, and solid (dry ice)  
12 forms of carbon dioxide converted to equivalent  
13 MCF; and

14 (iii) such royalty to apply with respect to  
15 both a direct producer of carbon dioxide and  
16 purchases of carbon dioxide from another per-  
17 son that is either affiliated or not affiliated with  
18 the purchaser.

19 (26) Requiring that—

20 (A) all carbon dioxide produced from Fed-  
21 eral and Indian leases be analyzed for carcino-  
22 genic benzene; and

23 (B) benzene produced with such carbon di-  
24 oxide must be filtered out and removed safely  
25 as necessary to prevent harm to the environ-

1           ment subjected to such benzene content, in  
2           order to create a maximum permissible level  
3           (MPL) of 5 parts per billion.

4           (27) Requiring that—

5                 (A) royalties be paid on the fair market  
6                 value of nitrogen extracted from such leases  
7                 that is used industrially for well stimulation,  
8                 helium recovery, or other uses; and

9                 (B) royalties be paid on the fair market  
10                value of ultimately processed helium recovered  
11                from such leases.

12           (28) Allowing only 5 percent of the value of the  
13           elemental sulfur recovered during processing of hy-  
14           drogen sulfide gas from such leases to be deducted  
15           for processing costs in determining royalty pay-  
16           ments.

17           (29) Requiring that all heating content analysis  
18           of natural gas be conducted to a minimum level of  
19           C<sub>15</sub>.

20           (30) Eliminating artificial conversion from dry  
21           BTU to wet BTU, and requiring that natural gas be  
22           analyzed and royalties paid for at all times on the  
23           basis of dry BTU only.

24           (31) Requiring that natural gas sampling be  
25           performed at all times with a floating piston cylinder

1 container at the same pressure intake as the pres-  
2 sure of the natural gas gathering line.

3 (32) Requiring use of natural gas filters with a  
4 minimum of 10 microns, and preferably 15 microns,  
5 both in the intake to natural gas sampling con-  
6 tainers and in the exit from the natural gas sam-  
7 pling containers into the chromatograph.

8 (33) Mandate the use of a Quad Unit for both  
9 portable and stationary chromatographs in order to  
10 correct for the presence of nitrogen and oxygen, if  
11 any, in certain natural gas streams.

12 (34) Require the calibration of all chro-  
13 matograph equipment every three months and the  
14 use of only American Gas Association-approved  
15 standard comparison containers for such calibration.

16 (35) Requiring that natural gas stored during  
17 the summer period and marketed during the winter  
18 period—

19 (A) be sold on the basis of the purchase  
20 price minus a maximum of \$0.50 per MMBTU  
21 storage charges; or

22 (B) be subject to payment of royalties on  
23 the basis of winter sales price minus \$0.50 per  
24 MMBTU.

1           (36) Requiring payment of royalties on any  
2 such natural gas stored on Federal or Indian lands  
3 on the basis of corresponding storage charges for the  
4 use of Federal or Indian lands, respectively, for such  
5 storage service.

6           (37) Imposing penalties for the intentional non-  
7 payment of royalties for natural gas liquids recov-  
8 ered—

9                   (A) from purging of natural gas gathering  
10 lines and natural gas pipelines; or

11                   (B) from field separators, dehydrators, and  
12 processing plants,

13 including cancellation of oil and natural gas leases  
14 and criminal penalties.

15           (38) Requiring that the separator, dehydrator,  
16 and natural gas meter be located within 100 feet of  
17 each natural gas wellhead.

18           (39) Requiring that BTU heating content anal-  
19 ysis be performed when the natural gas is at a tem-  
20 perature of 140 to 150 degrees Fahrenheit at all  
21 times, as required by the American Gas Association  
22 (AGA) regulations.

23           (40) Requiring that heating content analysis  
24 and volume measurements are identical at the sales  
25 point to what they are at the purchase point, after

1 allowing for a small volume for leakage in old pipes,  
2 but with no allowance for heating content discrep-  
3 ancy.

4 (41) Requiring that all natural gas produced  
5 under such leases be at all times sold to public, in-  
6 dustrial, storage, and private customers only on a  
7 MMBTU basis of MCF (1000 CF) x MBTU (1000  
8 BTU).

9 (42) Verification by the Secretary that the spe-  
10 cific gravity of natural gas produced under such  
11 leases, as measured at the meter run, corresponds to  
12 the heating content analysis data for such natural  
13 gas, in accordance with the Natural Gas Processors  
14 Association Publication 2145-71(1), entitled "Phys-  
15 ical Constants Of Paraffin Hydrocarbons And Other  
16 Components Of Natural Gas", and reporting of all  
17 discrepancies immediately.

18 (43) Prohibiting all deductions on royalty pay-  
19 ments for marketing of natural gas, condensate, and  
20 oil by an affiliate or agent.

21 (44) Requiring that all standards of the Amer-  
22 ican Petroleum Institute, the American Gas Associa-  
23 tion, the Gas Processors Association, and the Amer-  
24 ican Society of Testing Materials, Minerals Manage-  
25 ment Service Order No. 5, and all other Minerals

1 Management Service orders be faithfully observed  
2 and applied, and willful misconduct of such stand-  
3 ards and orders be subject to oil and gas lease can-  
4 cellation.

5 (45) Requiring that all oil and condensate pro-  
6 duced from Federal and Indian lands must be stored  
7 and measured in cylindrical tanks, and prohibiting  
8 any distortion, such as squeezing or bending of a  
9 storage tank, that hinders the true and honest meas-  
10 urement of volume of condensate and oil.

11 **SEC. 3. REVIEW OF ROYALTY PAYMENTS.**

12 The Secretary of the Interior, subject to the avail-  
13 ability of appropriations, shall award a contract under  
14 which the contractor shall—

15 (1) compare royalty payments made under Fed-  
16 eral oil and gas lease provisions for covered lands  
17 against data supplied to the Federal Energy Regu-  
18 latory Commission;

19 (2) make such comparison retroactive to June  
20 1, 1974, by integrating existing natural gas analog  
21 charts or digital meter results (or both) for each  
22 natural gas meter and multiplying the corresponding  
23 standard volume results by heating content analysis  
24 obtained from corresponding specific gravity meas-  
25 urement relationship;

1           (3) determine whether the correct production  
2           standard volume and total heating content analysis  
3           was used to calculate such payments; and

4           (4) determine whether such payments were ade-  
5           quate under the terms of such oil and gas leases, by  
6           among other procedures comparing the reported roy-  
7           alty values with respected published market price re-  
8           ports, such as Platts or Bloomberg's.

9 **SEC. 4. DEFINITIONS.**

10         In this Act:

11           (1) COVERED LANDS.—The term “covered  
12           lands” means—

13                 (A) all Federal onshore lands and offshore  
14                 lands that are under the administrative jurisdic-  
15                 tion of the Department of the Interior for pur-  
16                 poses of oil and gas leasing; and

17                 (B) Indian onshore lands.

18           (2) SECRETARY.—The term “Secretary” means  
19           the Secretary of the Interior.

○