

117TH CONGRESS
1ST SESSION

S. 645

To require the Secretary of the Treasury to levy a fee on methane emissions from oil and natural gas facilities, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 9, 2021

Mr. WHITEHOUSE (for himself, Mr. BOOKER, and Mr. SCHATZ) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To require the Secretary of the Treasury to levy a fee on methane emissions from oil and natural gas facilities, 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 “Methane Emissions
5 Reduction Act of 2021”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

1 (1) methane is a potent heat-trapping gas that
2 absorbs 28 to 36 times the quantity of energy that
3 carbon dioxide absorbs over a 100-year period;

4 (2) increased methane concentrations in the at-
5 mosphere are responsible for approximately 25 per-
6 cent of observed global warming;

7 (3) approximately $\frac{1}{3}$ of global anthropogenic
8 methane emissions are produced by the production
9 and transmission of fossil fuels;

10 (4) recent estimates suggest that methane emis-
11 sions from oil and natural gas operations in the
12 United States are 60 percent higher than previously
13 believed, representing 2.3 percent of natural gas pro-
14 duction;

15 (5) methane emissions from oil and natural gas
16 operations in the United States represent approxi-
17 mately \$2,000,000,000 in lost natural gas that could
18 be used to fuel 10,000,000 homes;

19 (6) estimates from the International Energy
20 Agency suggest that $\frac{1}{2}$ of methane emissions from
21 global oil and natural gas supply chains may be
22 eliminated at zero net cost;

23 (7) some oil and natural gas companies have
24 announced plans to reduce methane emissions from
25 the operations of those companies to below 0.2 per-

cent of production, demonstrating that significant reductions in methane emissions are technically and economically feasible; and

(8) numerous companies in the United States are developing innovative technologies to allow oil and natural gas companies to more cost-effectively detect and reduce methane emissions.

SEC. 3. DEFINITIONS.

In this Act:

(1) **BASIN.**—The term “basin” means a geologic province (as defined by the American Association of Petroleum Geologists).

(2) **EMPIRICALLY DETERMINED.**—The term “empirically determined” means determined through the collection of sufficient data in situ, including measurement on the ground or by drone, airplane, or satellite, for the purpose of accurately estimating the quantity of methane emissions from a basin.

(3) **METHANE.**—The term “methane” means a chemical compound with the chemical formula CH_4 .

(4) **METHANE EMISSION.**—The term “methane emission” means the release of methane from the extraction, production, gathering, processing, compression, transmission, or storage of—

(A) oil; or

1 (B) natural gas.

2 (5) METHANE FEE FACTOR.—The term “meth-
3 ane fee factor” means the amount calculated under
4 section 4(b)(2)(D) for the applicable calendar year.

5 (6) NATURAL GAS.—The term “natural gas”
6 has the meaning given the term in section 3 of the
7 Deepwater Port Act of 1974 (33 U.S.C. 1502).

8 (7) OIL.—The term “oil” has the meaning
9 given the term in section 3 of the Deepwater Port
10 Act of 1974 (33 U.S.C. 1502).

11 (8) PERCENTAGE OF VOLUME LOST TO THE AT-
12 MOSPHERE.—The term “percentage of volume lost
13 to the atmosphere” means, for any 1 company with
14 respect to any 1 basin—

15 (A) for companies that use the fee cal-
16 culated under section 4(b)(2)(B)(i), the per-
17 centage determined for the basin under the pro-
18 gram established under section 4(a); and

19 (B) for companies that use the fee cal-
20 culated under clause (iii) of section 4(b)(2)(C),
21 the quotient obtained by dividing—

22 (i) the methane emissions in the basin
23 during the applicable calendar year, as de-
24 termined by the company using a protocol

1 validated by the Secretary under clause (ii)
2 of that section; by

3 (ii) the total quantity of natural gas
4 produced, gathered, processed, trans-
5 mitted, or released and lost to the atmos-
6 phere by the company in the basin during
7 the applicable calendar year, as determined
8 by the company using a protocol validated
9 by the Secretary under clause (ii) of that
10 section.

11 (9) SECRETARY.—The term “Secretary” means
12 the Secretary of the Treasury.

13 **SEC. 4. FEE ON METHANE EMISSIONS.**

14 (a) ESTIMATE OF METHANE EMISSIONS.—Not later
15 than December 31, 2022, the Secretary, in consultation
16 with the Administrator of the Environmental Protection
17 Agency and the Administrator of the National Oceanic
18 and Atmospheric Administration, shall establish and im-
19 plement a program to estimate, based on empirically de-
20 termined, peer-reviewed methane emission rates, annual
21 methane emissions, and methane emission rates (ex-
22 pressed in percentage of natural gas production), from
23 each oil and natural gas producing basin.

24 (b) FEE.—

1 (1) IN GENERAL.—For calendar year 2023 and
 2 each calendar year thereafter, the Secretary shall
 3 levy a fee on methane emissions on each company
 4 that produces, gathers, processes, or transmits oil or
 5 natural gas.

6 (2) AMOUNT.—

7 (A) IN GENERAL.—The fee under para-
 8 graph (1) shall be calculated in accordance with
 9 subparagraph (B) or (C), as applicable.

10 (B) PROPORTIONAL FEE CALCULATION.—

11 (i) IN GENERAL.—Subject to subpara-
 12 graph (C), the fee under paragraph (1) for
 13 a basin in which a company produces,
 14 gathers, processes, or transmits oil or nat-
 15 ural gas for a calendar year shall be the
 16 sum obtained by adding—

17 (I) the product obtained by mul-
 18 tiplying—

19 (aa) the difference be-
 20 tween—

21 (AA) the percentage of
 22 volume lost to the atmos-
 23 phere in the basin during
 24 the calendar year; and

25 (BB) 0.2 percent;

1 (bb) the total quantity of
2 natural gas produced or released
3 and lost to the atmosphere dur-
4 ing oil or natural gas production
5 by the company in the basin dur-
6 ing the calendar year; and

7 (cc) the methane fee factor
8 for the applicable calendar year;
9 and

10 (II) the product obtained by mul-
11 tiplying—

12 (aa) the difference be-
13 tween—

14 (AA) the percentage of
15 volume lost to the atmos-
16 phere in the basin during
17 the calendar year; and

18 (BB) 0.1 percent;

19 (bb) the total quantity of
20 natural gas gathered, processed,
21 or transmitted by the company in
22 the basin during the calendar
23 year; and

24 (cc) the methane fee factor
25 for the applicable calendar year.

(ii) REQUIREMENT.—The fee calculated under clause (i) for a company shall be determined on a basin-by-basin basis for each basin in which the company produces, gathers, processes, or transmits oil or natural gas.

(C) ALTERNATIVE FEE CALCULATION.—

(i) OPT OUT.—A company may opt out of the fee calculated under subparagraph (B) if—

(I) the company submits to the Secretary a peer-reviewed protocol for empirically determining, on a basin-by-basin basis for all basins, the total amount of methane emissions that result from oil and natural gas facilities—

(aa) that the company operates; or

(bb) in which the company has an ownership interest; and

(II) the Secretary validates the protocol in accordance with clause (ii).

(ii) VALIDATION.—

1 (I) IN GENERAL.—The Secretary
2 may validate a protocol submitted
3 under clause (i)(I) if—

4 (aa) the Secretary deter-
5 mines that the protocol is an ac-
6 curate and comprehensive empir-
7 ical method for calculating the
8 methane emissions of the com-
9 pany submitting the protocol;

10 (bb) the protocol—

11 (AA) is peer-reviewed
12 by independent scientists;

13 (BB) is available to the
14 public in its entirety; and

15 (CC) requires the reg-
16 ular collection of data;

17 (cc) all underlying data col-
18 lected under the protocol are
19 available to the public; and

20 (dd) the Secretary deter-
21 mines that—

22 (AA) to the maximum
23 extent practicable, the com-
24 pany has installed state-of-
25 the-art technologies to detect

1 and eliminate methane leaks
2 from all oil and natural gas
3 facilities the company owns
4 or operates; and

5 (BB) subject to sub-
6 clause (III), the company
7 has prohibited the venting
8 and flaring of methane, ex-
9 cept in emergency cir-
10 cumstances.

11 (II) TIMELINE.—A protocol de-
12 scribed in clause (i)(I) shall be sub-
13 mitted to the Secretary for validation
14 under subclause (I) not later than
15 June 30 of the calendar year before
16 the calendar year for which the com-
17 pany is seeking to opt out of the fee
18 calculated under subparagraph (B).

19 (III) EMERGENCY CIR-
20 CUMSTANCES.—An emergency cir-
21 cumstance for which the venting or
22 flaring of methane is authorized under
23 subclause (I)(dd)(BB) does not in-
24 clude—

1 (aa) venting or flaring of
2 methane from oil wells because
3 the company has failed to develop
4 the infrastructure necessary to
5 capture, process, and transmit
6 methane associated with oil pro-
7 duction; or

8 (bb) any claim of economic
9 necessity.

10 (iii) CALCULATION.—For a company
11 that has opted out of the fee calculated
12 under subparagraph (B) in accordance
13 with clause (i), the fee under paragraph
14 (1) for a basin in which the company pro-
15 duces, gathers, processes, or transmits oil
16 or natural gas for a calendar year shall be
17 the sum obtained by adding—

18 (I) the product obtained by mul-
19 tiplying—

20 (aa) the difference be-
21 tween—

22 (AA) the percentage of
23 volume lost to the atmos-
24 phere in the basin during
25 the calendar year; and

1 (BB) 0.2 percent;

2 (bb) the total quantity of
3 natural gas produced or released
4 and lost to the atmosphere dur-
5 ing oil or natural gas production
6 by the company in the basin dur-
7 ing the calendar year; and

8 (cc) the methane fee factor
9 for the applicable calendar year;
10 and

11 (II) the product obtained by mul-
12 tiplying—

13 (aa) the difference be-
14 tween—

15 (AA) the percentage of
16 volume lost to the atmos-
17 phere in the basin during
18 the calendar year; and

19 (BB) 0.1 percent;

20 (bb) the total quantity of
21 natural gas gathered, processed,
22 or transmitted by the company in
23 the basin during the calendar
24 year; and

1 (cc) the methane fee factor
2 for the applicable calendar year.

3 (iv) REQUIREMENT.—The fee cal-
4 culated under clause (iii) for a company
5 that opted out of a fee calculated under
6 subparagraph (B) shall be determined on a
7 basin-by-basin basis for each basin in
8 which the company produces, gathers,
9 processes, or transmits oil or natural gas.

10 (D) METHANE FEE FACTOR.—

11 (i) INITIAL COST.—For calendar year
12 2023, the methane fee factor shall be
13 \$1,800 per ton.

14 (ii) ANNUAL ADJUSTMENT.—For each
15 calendar year after 2023, the methane fee
16 factor shall be adjusted to an amount that
17 is equal to the product obtained by multi-
18 plying—

19 (I) the methane fee factor for the
20 preceding calendar year; and

21 (II) the percentage obtained by
22 adding—

23 (aa) 102 percent; and

24 (bb) the percentage by which
25 the Consumer Price Index for the

1 calendar year exceeds the Con-
2 sumer Price Index for the pre-
3 ceding calendar year.

4 (3) TIMING.—Not later than July 1 of each
5 year, the Secretary shall calculate and levy the fee
6 under paragraph (1) for the preceding calendar year.

7 (4) NATIONAL COASTAL RESILIENCE FUND.—
8 Notwithstanding section 10(b)(2) of the National
9 Fish and Wildlife Foundation Establishment Act (16
10 U.S.C. 3709(b)(2)), the Secretary shall, on an an-
11 nual basis, transfer an amount equal to the amounts
12 collected under the fee under paragraph (1) to the
13 National Fish and Wildlife Foundation to provide
14 grants through the National Coastal Resilience
15 Fund of the National Fish and Wildlife Foundation
16 (or a successor program).

17 **SEC. 5. SAVINGS.**

18 Nothing in this Act—

19 (1) affects the ability to regulate methane emis-
20 sions under any other provision of law; or

21 (2) preempts a State from regulating or assess-
22 ing a fee on methane emissions from oil and gas fa-
23 cilities.

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