

118TH CONGRESS
1ST SESSION

S. 1947

To direct the Administrator of the Environmental Protection Agency to conduct a measurement-based national methane research pilot study to quantify methane emissions from certain oil and gas infrastructure, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 13, 2023

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

A BILL

To direct the Administrator of the Environmental Protection Agency to conduct a measurement-based national methane research pilot study to quantify methane emissions from certain oil and gas infrastructure, 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 Research Act of 2023”.

6 **SEC. 2. NATIONAL METHANE RESEARCH PILOT STUDY.**

7 (a) DEFINITIONS.—In this section:

1 (1) ADMINISTRATOR.—The term “Adminis-
2 trator” means the Administrator of the Environ-
3 mental Protection Agency.

4 (2) APPROPRIATE COMMITTEES OF CON-
5 GRESS.—The term “appropriate committees of Con-
6 gress” means—

7 (A) the Committee on Environment and
8 Public Works of the Senate; and

9 (B) the Committee on Science, Space, and
10 Technology of the House of Representatives.

11 (3) COVERED OIL AND GAS INFRASTRUC-
12 TURE.—

13 (A) IN GENERAL.—The term “covered oil
14 and gas infrastructure” means the infrastruc-
15 ture used for the production, gathering and
16 boosting, processing, transmission, and storage
17 of oil and natural gas in the United States.

18 (B) EXCLUSION.—The term “covered oil
19 and gas infrastructure” does not include oil and
20 gas distribution infrastructure.

21 (4) METHANE CENSUS.—The term “methane
22 census” means a national methane census study to
23 evaluate methane emissions from covered oil and gas
24 infrastructure that, if carried out, would—

1 (A) be undertaken on a recurring basis;
2 and

3 (B) encompass all 7 regions.

4 (5) PILOT STUDY.—The term “pilot study”
5 means the measurement-based national methane re-
6 search pilot study required under subsection (b).

7 (6) REGION.—The term “region” means any of
8 the 7 oil and gas regions evaluated in the July 2022
9 Drilling Productivity Report of the Energy Informa-
10 tion Administration.

11 (b) PILOT STUDY REQUIRED.—The Administrator,
12 in consultation with the Secretary of Energy, the Adminis-
13 trator of the National Aeronautics and Space Administra-
14 tion, the Administrator of the National Oceanic and At-
15 mospheric Administration, the Administrator of the Pipe-
16 line and Hazardous Materials Safety Administration, the
17 Director of the National Institute of Standards and Tech-
18 nology, and the heads of other Federal agencies as the
19 Administrator determines appropriate, shall conduct a
20 measurement-based national methane research pilot study
21 to quantify methane emissions from covered oil and gas
22 infrastructure.

23 (c) REQUIREMENTS.—

24 (1) IN GENERAL.—In carrying out the pilot
25 study, the Administrator shall—

1 (A) select 2 regions within which to carry
2 out the pilot study;

3 (B) identify areas consisting primarily of
4 covered oil and gas infrastructure within each
5 region selected under subparagraph (A);

6 (C) develop and implement methodologies
7 and procedures for a measurement-based eval-
8 uation of methane emissions from the covered
9 oil and gas infrastructure described in subpara-
10 graph (B);

11 (D) assess diverse approaches to the char-
12 acterization of methane emissions from the cov-
13 ered oil and gas infrastructure described in sub-
14 paragraph (B); and

15 (E) consult with Federal, State, local, aca-
16 demic, nonprofit, and private sector entities, as
17 appropriate.

18 (2) TECHNOLOGIES.—In carrying out the pilot
19 study, the Administrator shall—

20 (A) employ a technology or suite of tech-
21 nologies for methane emissions measurement,
22 research, and analysis; and

23 (B) to the extent practicable, consider
24 using innovative technologies for methane emis-
25 sions measurement and quantification.

1 (d) REPORT.—Not later than 2 years after the date
2 of enactment of this Act, the Administrator shall submit
3 to the appropriate committees of Congress, and make pub-
4 licly available, a report assessing the results of the pilot
5 study, which shall include—

6 (1) an overview of the findings of the pilot
7 study with respect to the quantification and charac-
8 terization of methane emissions from covered oil and
9 gas infrastructure;

10 (2) an analysis of how the pilot study could
11 support and inform the development and implemen-
12 tation of a methane census, which shall include an
13 analysis of—

14 (A) the feasibility of evaluating the amount
15 of methane emissions from covered oil and gas
16 infrastructure by region, industry segment, type
17 of emission source, or any other criterion, as a
18 component of a methane census;

19 (B) the necessary scope of measurement-
20 based activities within regions in order to carry
21 out a methane census;

22 (C) any onshore or offshore gaps within
23 the scope of the pilot study that could merit in-
24 clusion as a part of a methane census;

1 (D) the estimated budget that would be re-
2 quired to oversee a methane census; and

3 (E) any other relevant topic, as determined
4 by the Administrator;

5 (3) an analysis of how the measurement-based
6 evaluation of methane emissions from covered oil
7 and gas infrastructure, as completed by the pilot
8 study or contemplated for a methane census, could
9 support efforts to reconcile data generated by top-
10 down methods and bottom-up methods of analysis of
11 methane emissions from covered oil and gas infra-
12 structure with respect to the Inventory of U.S.
13 Greenhouse Gas Emissions and Sinks of the Envi-
14 ronmental Protection Agency, which shall include an
15 analysis of—

16 (A) how methane emissions data from the
17 pilot study or a methane census could be used
18 as a part of a reconciliation process to better
19 understand and improve data estimates from
20 both top-down methods and bottom-up methods
21 of analysis of methane emissions from covered
22 oil and gas infrastructure;

23 (B) how methane emissions data from the
24 pilot study or a methane census could identify
25 and help to explore any significant discrep-

1 ancies between top-down methods and bottom-
2 up methods of analysis of methane emissions
3 from covered oil and gas infrastructure; and

4 (C) any other relevant topic, as determined
5 by the Administrator;

6 (4) a description of any research or technology
7 gaps that were identified during the course of the
8 pilot study and could merit additional study to sup-
9 port the improvement of methane emissions meas-
10 urement and quantification; and

11 (5) a description of the methodology of the pilot
12 study that, to the greatest extent practicable and
13 consistent with appropriate protections for confiden-
14 tial business information and intellectual property,
15 as determined by the Administrator, includes a dis-
16 cussion of—

17 (A) study design;

18 (B) measurement techniques;

19 (C) efforts to account for additional sig-
20 nificant sources of methane emissions within a
21 region; and

22 (D) assumptions and uncertainties in the
23 results of the pilot study.

24 (e) METHANE EMISSIONS DATA INTEROPER-
25 ABILITY.—

1 (1) IN GENERAL.—The Administrator, to the
2 greatest extent practicable, shall ensure that all data
3 collected as part of the pilot study adheres to data
4 and metadata standards determined appropriate by
5 the Administrator to support the public findability,
6 accessibility, interoperability, and reusability of those
7 data.

8 (2) CONSULTATION.—In carrying out para-
9 graph (1), the Administrator shall consult with the
10 heads of other Federal agencies, as appropriate—

11 (A) to facilitate effective data sharing re-
12 garding methane emissions measurement and
13 quantification data; and

14 (B) to ensure that methane emissions
15 measurement and quantification data gathered
16 by those other Federal agencies can be con-
17 verted to a format that is consistent with the
18 methodologies and procedures of the pilot
19 study.

20 (f) AUTHORIZATION OF APPROPRIATIONS.—There is
21 authorized to be appropriated to carry out this section
22 \$20,000,000, to remain available until expended.

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