

111TH CONGRESS
1ST SESSION

S. 1539

To authorize the National Oceanic and Atmospheric Administration to establish a comprehensive greenhouse gas observation and analysis system, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 29, 2009

Mr. ROCKEFELLER (for himself and Mr. NELSON of Florida) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To authorize the National Oceanic and Atmospheric Administration to establish a comprehensive greenhouse gas observation and analysis system, 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 “Greenhouse Gas Obser-
5 vation and Analysis System Act”.

6 **SEC. 2. PURPOSES.**

7 The purposes of this Act are—

1 (1) to establish a comprehensive national green-
 2 house gas observation and analysis system to sup-
 3 port verification of greenhouse gas emissions;

4 (2) to establish a baseline characterizing the in-
 5 fluence of current and past greenhouse gas emis-
 6 sions on atmospheric composition; and

7 (3) to provide a scientifically robust record of
 8 atmospheric greenhouse gas concentrations.

9 **SEC. 3. ESTABLISHMENT OF GREENHOUSE GAS OBSERVA-**
 10 **TION AND ANALYSIS SYSTEM.**

11 (a) IN GENERAL.—The Administrator shall establish
 12 a greenhouse gas observation and analysis system that will
 13 offer the resolution and widespread coverage required to
 14 verify reduction and mitigation of greenhouse gases. In es-
 15 tablishing the system, the Administrator shall coordinate
 16 with the Department of Commerce’s National Institute of
 17 Standards and Technology, the National Aeronautics and
 18 Space Administration, the National Science Foundation,
 19 the Department of Energy, the Department of Agri-
 20 culture, and the United States Geological Survey.

21 (b) SYSTEM COMPONENTS.—The system—

22 (1) shall be an operational and scientifically ro-
 23 bust greenhouse gas observation and analysis system
 24 that includes local and regional ground-based obser-
 25 vations, space-based observations, carbon-cycle mod-

eling, greenhouse gas inventories, meta-analysis, and
 extensive data integration and distribution to pro-
 vide quantitative information about sources, sinks,
 and fluxes of greenhouse gases at relevant temporal
 and spatial scales; and

(2) shall be capable of—

(A) differentiating between source and sink
 exchanges;

(B) identifying types of emissions (fossil-
 fuel and non-fossil fuel sources); and

(C) tracking agricultural and other sinks;
 and

(3) shall include—

(A) sustained ground, sea, and air-based
 measurements;

(B) sustained space-based observations;

(C) measurements of tracer, including iso-
 topes and non-carbon dioxide gases;

(D) carbon cycle monitoring;

(E) carbon cycle modeling;

(F) traceability to the International Sys-
 tem of Units; and

(G) data assimilation and analysis.

(c) COORDINATION.—The Administrator shall, to the
 extent appropriate—

1 (1) facilitate coordination of—

2 (A) observations and modeling;

3 (B) data and information management sys-
4 tems, including archive and access; and

5 (C) the development and transfer of tech-
6 nologies to facilitate the evaluation of green-
7 house gas emission reductions, offsets, and
8 other mitigation strategies;

9 (2) coordinate with the National Institute of
10 Standards and Technology to make sure that the
11 greenhouse gas observation and analysis system is
12 based upon quantitative measurements traceable to
13 international standards; and

14 (3) coordinate with other Federal agencies and
15 international organizations and agencies involved in
16 international or domestic programs.

17 **SEC. 4. SYSTEM PLAN.**

18 (a) IN GENERAL.—Not later than 1 year after the
19 date of enactment of this Act, the Administrator shall, in
20 coordination with the agencies described in section 3, de-
21 velop and submit a plan for an integrated and comprehen-
22 sive greenhouse gas observation and analysis system to the
23 Senate Committee on Commerce, Science, and Transpor-
24 tation and the House of Representatives Committee on
25 Science and Technology.

1 (b) PLAN REQUIREMENTS.—The plan shall—

2 (1) identify and describe current national and
3 international greenhouse gas observation networks,
4 modeling, and data analysis efforts;

5 (2) contain an inventory of agency data relevant
6 to greenhouse gases;

7 (3) assess gaps, conflicts, and opportunities
8 with respect to the matters described in paragraphs
9 (1) and (2);

10 (4) establish priorities, define agency roles, and
11 make recommendations on necessary capacity and
12 capabilities for—

13 (A) ground, sea, and air-based measure-
14 ments;

15 (B) sustained space-based observations;

16 (C) measurements of tracer, including iso-
17 topes and non-carbon dioxide gases;

18 (D) carbon cycle monitoring;

19 (E) carbon cycle modeling;

20 (F) measurement traceability and com-
21 parability;

22 (G) data assimilation and analysis; and

23 (H) data archive management and data ac-
24 cess; and

1 (5) establish and define mechanisms for ensur-
2 ing continuity of domestic and international green-
3 house gas measurements, and contribute to inter-
4 national efforts to build and operate a global green-
5 house gas information system, in coordination with
6 the World Meteorological Organization and other
7 international organizations and agencies, as appro-
8 priate.

9 **SEC. 5. REPORTS.**

10 The Administrator shall, not less than every 4 years
11 after the date of enactment of this Act and in coordination
12 with the agencies described in section 3, submit a report
13 to the Senate Committee on Commerce, Science, and
14 Transportation and the House of Representatives Com-
15 mittee on Science and Technology that includes—

16 (1) an analysis of the progress made toward
17 achieving the goals and objectives of the plan out-
18 lined in section 4;

19 (2) an evaluation of the effectiveness of the sys-
20 tem;

21 (3) recommendations concerning modifications
22 to the system;

23 (4) an analysis of the consistency of reported
24 greenhouse gas emission reductions with inde-

1 pendent observations of atmospheric and Earth-sys-
2 tem trends; and

3 (5) an update on changes or trends in Earth-
4 system sources and sinks of greenhouse gases.

5 **SEC. 6. AGREEMENTS.**

6 (a) IN GENERAL.—The Administrator may enter into
7 and perform such contracts, leases, grants, cooperative
8 agreements, or other agreements as may be necessary to
9 carry out the purposes of this Act.

10 (b) SPECIFIC AUTHORITY.—Notwithstanding any
11 other provision of law, the Administrator may—

12 (1) enter into long-term leases of up to 20
13 years for the use of unimproved land to site small
14 shelter facilities, antennae, and equipment including
15 weather, tide, tidal currents, river, and air sampling
16 or measuring equipment;

17 (2) enter into long-term licenses of up to 20
18 years at no cost to site facilities and equipment in-
19 cluding weather, tide, tidal currents, river, and air
20 sampling or measuring equipment;

21 (3) acquire (by purchase, lease, or otherwise),
22 lease, sell, and dispose of or convey services, money,
23 securities, or property (whether real, personal, intel-
24 lectual, or of any other kind) or an interest therein;

1 (4) construct, improve, repair, operate, main-
 2 tain, outgrant, and dispose of real or personal prop-
 3 erty, including buildings, facilities, and land; and

4 (5) waive capital lease scoring requirements for
 5 any lease of space on commercial antennas to sup-
 6 port weather radio equipment, air sampling, or
 7 measuring equipment.

8 (c) CERTAIN LEASED EQUIPMENT.—Notwith-
 9 standing any other provision of law, rule, or regulation,
 10 leases of antenna or equipment on towers or other struc-
 11 tures shall be considered operating leases for the purpose
 12 of capital lease scoring.

13 **SEC. 7. EFFECT ON OTHER LAWS.**

14 Nothing in this Act shall be construed to supersede
 15 or alter the existing authorities of any Federal agency with
 16 respect to Earth science research or greenhouse gas miti-
 17 gation.

18 **SEC. 8. DEFINITIONS.**

19 In this Act:

20 (1) ADMINISTRATOR.—The term “Adminis-
 21 trator” means the Administrator of the National
 22 Oceanic and Atmospheric Administration.

23 (2) EARTH-SYSTEM.—The term “Earth-sys-
 24 tem” means the Earth’s biosphere, including the

1 ocean, atmosphere, and soils that influence the
2 amounts of greenhouse gas in the atmosphere.

3 (3) GREENHOUSE GAS.—The term “greenhouse
4 gas” means a gas in the atmosphere that increases
5 the radiative forcing of the Earth-atmosphere sys-
6 tem.

7 (4) INTERNATIONAL SYSTEM OF UNITS.—The
8 term “International System of Units” means the
9 modern metric system of units established in 1960
10 by the 11th General Conference on Weight and
11 Measures.

12 (5) RADIATIVE FORCING.—The term “radiative
13 forcing” means the measure of the influence that a
14 substance or process has in altering the balance of
15 incoming and outgoing energy in the Earth-system.

16 (6) SINK.—The term “sink” means the removal
17 of a greenhouse gas from the atmosphere.

18 (7) SOURCE.—The term “source” means the
19 emission of a greenhouse gas into the atmosphere.

20 (8) SYSTEM.—The term “system” means the
21 national greenhouse gas observation and analysis
22 system established under section 3.

23 (9) TRACER.—The term “tracer” means an at-
24 mospheric substance that can be used to assess or
25 determine the origin of a greenhouse gas.

1 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

2 There are authorized to be appropriated to the Sec-
3 retary of Commerce such sums as appropriate to carry out
4 this Act.

