

Calendar No. 125

111TH CONGRESS
1ST SESSION**S. 849****[Report No. 111–58]**

To require the Administrator of the Environmental Protection Agency to
conduct a study on black carbon emissions.

IN THE SENATE OF THE UNITED STATES

APRIL 22, 2009

Mr. CARPER (for himself, Mr. INHOFE, Mrs. BOXER, Mr. KERRY, Ms. COLLINS, Mr. VOINOVICH, Mr. MERKLEY, and Ms. KLOBUCHAR) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

JULY 22, 2009

Reported by Mrs. BOXER, without amendment

A BILL

To require the Administrator of the Environmental Protection Agency to conduct a study on black carbon emissions.

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. FINDINGS.**

4 Congress finds that—

5 (1) black carbon—

1 (A) is a component of ambient particulate
2 matter, the mixture of which has been found to
3 harm public health by causing serious res-
4 piratory and cardiovascular effects in developed
5 and developing countries;

6 (B) plays a role in climate change by—

7 (i) absorbing solar radiation; and

8 (ii) reducing the reflectivity of snow
9 and ice; and

10 (C) is emitted from incomplete combustion
11 of fossil fuels, biomass, and biofuels;

12 (2) recent studies have shown that, in the
13 United States, old diesel engines are a major con-
14 tributor of black carbon;

15 (3)(A) the United States has made great
16 progress in reducing black carbon emissions through
17 regulations on new vehicles and engines and a vol-
18 untary national diesel retrofit program; but

19 (B) there remain in the United States more
20 than 11,000,000 diesel engines lacking the latest
21 diesel emission control technology; and

22 (4) the collection of information relating to, and
23 research regarding, black carbon would be useful to
24 identify cost-effective methods of reducing black car-
25 bon emissions in ways and from sources that would

1 have beneficial effects on the public health and the
2 climate.

3 **SEC. 2. DEFINITIONS.**

4 In this Act:

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

8 (2) BLACK CARBON.—The term “black carbon”
9 means any light-absorbing graphitic (such as ele-
10 mental) particle produced by incomplete combustion.

11 **SEC. 3. STUDY OF BLACK CARBON EMISSIONS.**

12 (a) STUDY.—The Administrator, in consultation with
13 the Secretary of Energy, the Secretary of State, and the
14 heads of the National Oceanic and Atmospheric Adminis-
15 tration, the National Aeronautics and Space Administra-
16 tion, the United States Agency for International Develop-
17 ment, the National Institutes of Health, the Centers for
18 Disease Control and Prevention, and other relevant Fed-
19 eral departments and agencies and representatives of ap-
20 propriate industry and environmental groups, shall con-
21 duct a 4-phase study of black carbon emissions, the phases
22 of which shall be the following:

23 (1) PHASE I—UNIVERSAL DEFINITION.—The
24 Administrator shall conduct phase I of the study
25 under this subsection to carry out measures to es-

1 tablish for the scientific community standard defini-
2 tions of the terms—

3 (A) black carbon; and

4 (B) organic carbon.

5 (2) PHASE II—SOURCES AND TECHNOLOGIES.—

6 The Administrator shall conduct phase II of the
7 study under this subsection to summarize the avail-
8 able scientific and technical information con-
9 cerning—

10 (A) the identification of the major sources
11 of black carbon emissions in the United States
12 and throughout the world;

13 (B) an estimate of—

14 (i) the quantity of current and pro-
15 jected future black carbon emissions from
16 those sources; and

17 (ii) the net climate effects of the emis-
18 sions;

19 (C) the most recent scientific data relevant
20 to the public health- and climate-related im-
21 pacts of black carbon emissions and associated
22 emissions of organic carbon, nitrogen oxides,
23 and sulfur oxides from the sources identified
24 under subparagraph (A);

(D) the most effective control strategies for additional domestic and international reductions in black carbon emissions, taking into consideration lifecycle analysis, cost-effectiveness, and the net climate impact of technologies, operations, and strategies, such as—

(i) diesel particulate filters on existing diesel on- and off-road engines; and

(ii) particulate emission reduction measures for marine vessels;

(E) carbon dioxide equivalency factors, global or regional modeling, or other metrics to compare the global warming and other climate effects of black carbon emissions with carbon dioxide and other greenhouse gas emissions; and

(F) the health benefits associated with additional black carbon emission reductions.

(3) PHASE III—INTERNATIONAL FUNDING.—The Administrator shall conduct phase III of the study under this subsection—

(A) to summarize the amount, type, and direction of all actual and potential financial, technical, and related assistance provided by

the United States to foreign countries to reduce, mitigate, or otherwise abate—

(i) black carbon emissions; and

(ii) any health, environmental, and economic impacts associated with those emissions; and

(B) to identify opportunities, including action under existing authority, to achieve significant black carbon emission reductions in foreign countries through the provision of technical assistance or other approaches.

(4) PHASE IV—RESEARCH AND DEVELOPMENT OPPORTUNITIES.—The Administrator conduct phase IV of the study under this subsection for the purpose of providing to Congress recommendations regarding—

(A) areas of focus for additional research for cost-effective technologies, operations, and strategies with the highest potential to reduce black carbon emissions and protect public health in the United States and internationally; and

(B) actions that the Federal Government could take to encourage or require additional black carbon emission reductions.

1 (b) REPORTS.—The Administrator shall submit to
2 Congress—

3 (1) by not later than 180 days after the date
4 of enactment of this Act, a report describing the re-
5 sults of phases I and II of the study under para-
6 graphs (1) and (2) of subsection (a);

7 (2) by not later than 270 days after the date
8 of enactment of this Act, a report describing the re-
9 sults of phase III of the study under subsection
10 (a)(3); and

11 (3) by not later than 1 year after the date of
12 enactment of this Act, a report describing the rec-
13 ommendations developed for phase IV of the study
14 under subsection (a)(4).

15 (c) AUTHORIZATION OF APPROPRIATIONS.—There
16 are authorized to be appropriated such sums as are nec-
17 essary to carry out this section.

Calendar No. 125

111TH CONGRESS
1ST Session

S. 849

[Report No. 111-58]

A BILL

To require the Administrator of the Environmental Protection Agency to conduct a study on black carbon emissions.

JULY 22, 2009

Reported without amendment