

111TH CONGRESS
1ST SESSION

S. 1095

To amend the Clean Air Act to convert the renewable fuel standard into a low-carbon fuel standard, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 20, 2009

Mr. WYDEN introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To amend the Clean Air Act to convert the renewable fuel standard into a low-carbon fuel standard, 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 “America’s Low-Carbon
5 Fuel Standard Act of 2009”.

6 **SEC. 2. LOW-CARBON FUEL PROGRAM.**

7 (a) IN GENERAL.—Section 211 of the Clean Air Act
8 (42 U.S.C. 7545) is amended by striking subsection (o)
9 and inserting the following:

10 “(o) LOW-CARBON FUEL PROGRAM.—

1 “(1) DEFINITIONS.—In this subsection:

2 “(A) BASELINE LIFECYCLE GREENHOUSE
3 GAS EMISSIONS.—The term ‘baseline lifecycle
4 greenhouse gas emissions’ means the average
5 lifecycle greenhouse gas emissions, as deter-
6 mined by the Administrator, after notice and
7 opportunity for comment, for transportation
8 fuel sold or distributed as transportation fuel in
9 2005.

10 “(B) LIFECYCLE GREENHOUSE GAS EMIS-
11 SIONS.—The term ‘lifecycle greenhouse gas
12 emissions’ means the aggregate quantity of
13 greenhouse gas emissions (including direct
14 emissions and significant indirect emissions
15 such as significant emissions from land use
16 changes), as determined by the Administrator,
17 related to the full fuel lifecycle, including all
18 stages of fuel and feedstock production and dis-
19 tribution, from feedstock generation or extrac-
20 tion through the distribution and delivery and
21 use of the finished fuel to the ultimate con-
22 sumer, where the mass values for all green-
23 house gases are adjusted to account for their
24 relative global warming potential.

1 “(C) LOW-CARBON FUEL.—The term ‘low-
 2 carbon fuel’ means transportation fuel (includ-
 3 ing renewable fuel, electricity, hydrogen, and
 4 other forms of energy) that has lifecycle green-
 5 house gas emissions, as determined by the Ad-
 6 ministrator, after notice and opportunity for
 7 comment, that on annual average basis are
 8 equal to at least the following percentage less
 9 than baseline lifecycle greenhouse gas emissions
 10 determined in accordance with the following
 11 table:

“Calendar year:	Applicable percentage less than baseline lifecycle greenhouse gas emissions:
2015	20.0
2016	21.5
2017	23.0
2018	24.5
2019	26.0
2020	27.5
2021	29.0
2022	30.5
2023	32.0
2024	33.5
2025	35.0
2026	36.5
2027	38.0
2028	39.5
2029	41.0
2030	42.5
2031 and thereafter	Percentage determined under paragraph (2)(B)(ii).

12 “(D) RENEWABLE BIOMASS.—The term
 13 ‘renewable biomass’ means each of the fol-
 14 lowing:

1 “(i) Planted crops and crop residue
2 harvested from agricultural land cleared or
3 cultivated at any time prior to December
4 19, 2007, that is either actively managed
5 or fallow, and nonforested.

6 “(ii) Planted trees, bioenergy crops,
7 and tree residue from actively managed
8 tree plantations on non-Federal land
9 cleared at any time prior to December 19,
10 2007, including land belonging to an In-
11 dian tribe or an Indian individual, that is
12 held in trust by the United States or sub-
13 ject to a restriction against alienation im-
14 posed by the United States.

15 “(iii) Slash, brush, and those trees
16 that are byproducts of ecological restora-
17 tion, disease or insect infestation control,
18 or hazardous fuels reduction treatments
19 and do not exceed the minimum size stand-
20 ards for sawtimber, harvested—

21 “(I) in ecologically sustainable
22 quantities, as determined by the ap-
23 propriate Federal land manager; and

24 “(II) from National Forest Sys-
25 tem land or public land (as defined in

1 section 103 of the Federal Land Pol-
2 icy and Management Act of 1976 (43
3 U.S.C. 1702)), other than—

4 “(aa) components of the Na-
5 tional Wilderness Preservation
6 System;

7 “(bb) wilderness study
8 areas;

9 “(cc) inventoried roadless
10 areas;

11 “(dd) old growth or late suc-
12 cessional forest stands unless bio-
13 mass from the stand is harvested
14 as a byproduct of an ecological
15 restoration treatment that fully
16 maintains, or contributes toward
17 the restoration of, the structure
18 and composition of an old growth
19 forest stand taking into account
20 the contribution of the stand to
21 landscape fire adaptation and
22 watershed health, and retaining
23 large trees contributing to old-
24 growth structure;

1 “(ee) components of the Na-
2 tional Landscape Conservation
3 System; and

4 “(ff) National Monuments.

5 “(iv) Animal waste material and ani-
6 mal byproducts.

7 “(v) Slash and pre-commercial
8 thinnings that are from non-Federal
9 forestland, including forestland belonging
10 to an Indian tribe or an Indian individual,
11 that are held in trust by the United States
12 or subject to a restriction against alien-
13 ation imposed by the United States, but
14 not forests or forestland that are ecological
15 communities with a global or State ranking
16 of critically imperiled, imperiled, or rare
17 pursuant to a State Natural Heritage Pro-
18 gram, old growth forest, or late succes-
19 sional forest.

20 “(vi) Biomass from land in any own-
21 ership obtained from the immediate vicin-
22 ity of buildings and other areas regularly
23 occupied by people, or of public infrastruc-
24 ture, at risk from wildfire.

25 “(vii) Algae.

1 “(viii) Municipal solid waste, including
2 separated yard waste or food waste, includ-
3 ing recycled cooking and trap grease.

4 “(E) RENEWABLE FUEL.—The term ‘re-
5 newable fuel’ means fuel that is—

6 “(i) produced from renewable bio-
7 mass; and

8 “(ii) used to replace or reduce the
9 quantity of fossil fuel present in a trans-
10 portation fuel.

11 “(F) TRANSPORTATION FUEL.—The term
12 ‘transportation fuel’ means fuel for use in
13 motor vehicles, motor vehicle engines, or
14 nonroad vehicles (except for ocean-going ves-
15 sels).

16 “(2) PROGRAM.—

17 “(A) REGULATIONS.—

18 “(i) IN GENERAL.—Not later than
19 January 31, 2015, the Administrator shall
20 promulgate regulations to ensure that the
21 applicable percentage determined under
22 subparagraph (B) of the transportation
23 fuel sold or introduced into commerce in
24 the United States, on an annual average
25 basis, is low-carbon fuel.

1 “(ii) PROVISIONS OF REGULATIONS.—

2 Regardless of the date of promulgation,
3 the regulations promulgated under clause
4 (i)—

5 “(I) shall contain compliance pro-
6 visions applicable to producers, refin-
7 ers, blenders, distributors, and im-
8 porters, as appropriate, to ensure that
9 the requirements of this paragraph
10 are met; but

11 “(II) shall not—

12 “(aa) restrict geographic
13 areas in which low-carbon fuel
14 may be used; or

15 “(bb) impose any per-gallon
16 obligation for the use of low-car-
17 bon fuel.

18 “(B) APPLICABLE VOLUMES.—

19 “(i) CALENDAR YEARS 2015 THROUGH
20 2030.—For the purpose of subparagraph
21 (A), the applicable percentage of the trans-
22 portation fuel sold or introduced into com-
23 merce in the United States, on an annual
24 average basis, that is low-carbon fuel for
25 each of calendar years 2015 through 2030

1 shall be determined by the Administrator,
2 in consultation with the Secretary of En-
3 ergy, in accordance with the following
4 table:

“Calendar year:	Applicable percentage of transportation fuel sold that is low-carbon fuel:
2015	10.0
2016	11.5
2017	13.0
2018	14.5
2019	16.0
2020	17.5
2021	19.0
2022	20.5
2023	22.0
2024	23.5
2025	25.0
2026	26.5
2027	28.0
2028	29.5
2029	31.0
2030	32.5.

5 “(ii) SUBSEQUENT CALENDAR
6 YEARS.—

7 “(I) IN GENERAL.—For the pur-
8 poses of subparagraph (A), the appli-
9 cable percentage of the transportation
10 fuel sold or introduced into commerce
11 in the United States (except in non-
12 contiguous States or territories), on
13 an annual average basis, that is low-
14 carbon fuel for calendar year 2031
15 and each subsequent calendar year
16 shall be determined by the Adminis-

1 trator, in consultation with the Sec-
2 retary of Energy, based on a review of
3 the implementation of the program
4 during calendar years specified in the
5 tables established under this sub-
6 section, and an analysis of—

7 “(aa) the impact of the pro-
8 duction and use of low-carbon
9 fuel on the environment, includ-
10 ing on air quality, climate
11 change, conversion of wetland,
12 ecosystems, wildlife habitat,
13 water quality, and water supply;

14 “(bb) the impact of low-car-
15 bon fuel on the energy security of
16 the United States;

17 “(cc) the expected annual
18 rate of future commercial produc-
19 tion of low-carbon fuel;

20 “(dd) the impact of low-car-
21 bon fuel on the infrastructure of
22 the United States, including de-
23 liverability of materials, goods,
24 and products other than low-car-
25 bon fuel, and the sufficiency of

1 infrastructure to deliver and use
2 low-carbon fuel;

3 “(ee) the impact of the use
4 of low-carbon fuel on the cost to
5 consumers of transportation fuel
6 and on the cost to transport
7 goods; and

8 “(ff) the impact of the use
9 of low-carbon fuel on other fac-
10 tors, including job creation, the
11 price and supply of agricultural
12 commodities, rural economic de-
13 velopment, and food prices.

14 “(II) DEADLINE.—The Adminis-
15 trator shall promulgate rules estab-
16 lishing the applicable volumes under
17 this clause not later than 14 months
18 before the first year for which the ap-
19 plicable percentage will apply.

20 “(3) APPLICABLE PERCENTAGES.—

21 “(A) PROVISION OF ESTIMATE OF VOL-
22 UMES OF GASOLINE SALES.—Not later than Oc-
23 tober 31 of each of calendar years 2005
24 through 2021, the Administrator of the Energy
25 Information Administration shall provide to the

1 Administrator of the Environmental Protection
2 Agency an estimate, with respect to the fol-
3 lowing calendar year, of the volumes of trans-
4 portation fuel and low-carbon fuel projected to
5 be sold or introduced into commerce in the
6 United States.

7 “(B) DETERMINATION OF APPLICABLE
8 PERCENTAGES.—

9 “(i) IN GENERAL.—Not later than
10 November 30 of each of calendar years
11 2015 through 2029, based on the estimate
12 provided under subparagraph (A), the Ad-
13 ministrator of the Environmental Protec-
14 tion Agency shall determine and publish in
15 the Federal Register, with respect to the
16 following calendar year, the low-carbon fuel
17 obligation that ensures that the require-
18 ments of paragraph (2) are met.

19 “(ii) REQUIRED ELEMENTS.—The
20 low-carbon fuel obligation determined for a
21 calendar year under clause (i) shall—

22 “(I) be applicable to refineries,
23 blenders, and importers, as appro-
24 priate;

1 “(II) be expressed in terms of a
2 volume percentage of transportation
3 fuel sold or introduced into commerce
4 in the United States; and

5 “(III) subject to subparagraph
6 (C), consist of a single applicable per-
7 centage that applies to all categories
8 of persons specified in subclause (I).

9 “(C) ADJUSTMENTS.—In determining the
10 applicable percentage for a calendar year, the
11 Administrator shall make adjustments to pre-
12 vent the imposition of redundant obligations on
13 any person specified in subparagraph (B)(ii)(I).

14 “(4) MODIFICATION OF GREENHOUSE GAS RE-
15 DUCTION PERCENTAGES.—

16 “(A) IN GENERAL.—In the regulations
17 promulgated under paragraph (2)(A)(i), the Ad-
18 ministrator may adjust the required percentage
19 reductions in lifecycle greenhouse gas emissions
20 for low-carbon fuel to a lower percentage if the
21 Administrator determines that generally the re-
22 duction is not commercially feasible for low-car-
23 bon fuel made using a variety of feedstocks,
24 technologies, and processes to meet the applica-
25 ble reduction.

1 “(B) AMOUNT OF ADJUSTMENT.—In pro-
2 mulgating regulations under this paragraph, the
3 specified percent reduction in greenhouse gas
4 emissions from low-carbon fuel may not be re-
5 duced more than 10 percentage points below
6 the percentage otherwise required under this
7 subsection.

8 “(C) ADJUSTED REDUCTION LEVELS.—

9 “(i) IN GENERAL.—An adjustment in
10 the percentage reduction in greenhouse gas
11 levels shall be the minimum practicable ad-
12 justment for low-carbon fuel.

13 “(ii) MAXIMUM ACHIEVABLE
14 LEVEL.—The adjusted greenhouse gas re-
15 duction shall be established at the max-
16 imum achievable level, taking cost in con-
17 sideration, allowing for the use of a variety
18 of feedstocks, technologies, and processes.

19 “(D) SUBSEQUENT ADJUSTMENTS.—

20 “(i) IN GENERAL.—After the Admin-
21 istrator has promulgated a final rule under
22 paragraph (2)(A)(i) with respect to the
23 method of determining lifecycle greenhouse
24 gas emissions, the Administrator may not
25 adjust the percent greenhouse gas reduc-

1 tion levels unless the Administrator deter-
2 mines that there has been a significant
3 change in the analytical basis used for de-
4 termining the lifecycle greenhouse gas
5 emissions.

6 “(ii) CRITERIA AND STANDARDS.—If
7 the Administrator makes the determination
8 that an adjustment is required, the Admin-
9 istrator may adjust the percent reduction
10 levels through rulemaking using the cri-
11 teria and standards established under this
12 paragraph.

13 “(iii) 5-YEAR REVIEW.—If the Admin-
14 istrator makes any adjustment under this
15 paragraph, not later than 5 years there-
16 after, the Administrator shall review and
17 revise (based on the same criteria and
18 standards as required for the initial adjust-
19 ment) the level as adjusted by the regula-
20 tions.

21 “(5) CREDIT PROGRAM.—

22 “(A) IN GENERAL.—The regulations pro-
23 mulgated under paragraph (2)(A) shall provide
24 for the generation of an appropriate quantity of
25 credits by any person that refines, blends, im-

1 ports, or distributes transportation fuel that
2 contains a quantity of low-carbon fuel that is
3 greater than the quantity required under para-
4 graph (2).

5 “(B) USE OF CREDITS.—A person that
6 generates credits under subparagraph (A) may
7 use the credits, or transfer all or a portion of
8 the credits to another person, for the purpose
9 of complying with paragraph (2).

10 “(C) DURATION OF CREDITS.—A credit
11 generated under this paragraph shall be valid to
12 demonstrate compliance for the 12-month pe-
13 riod beginning on the date of generation.

14 “(D) INABILITY TO GENERATE OR PUR-
15 CHASE SUFFICIENT CREDITS.—The regulations
16 promulgated under paragraph (2)(A) shall in-
17 clude provisions allowing any person that is un-
18 able to generate or purchase sufficient credits
19 to meet the requirements of paragraph (2) to
20 carry forward a low-carbon fuel deficit on con-
21 dition that the person, in the calendar year fol-
22 lowing the year in which the low-carbon fuel
23 deficit is created—

1 “(i) achieves compliance with the low-
2 carbon fuel requirement under paragraph
3 (2); and

4 “(ii) generates or purchases additional
5 low-carbon fuel credits to offset the low-
6 carbon fuel deficit of the previous year.

7 “(E) CREDITS FOR ADDITIONAL LOW-CAR-
8 BON FUEL.—The Administrator may promul-
9 gate regulations providing—

10 “(i) for the generation of an appro-
11 priate quantity of credits by any person
12 that refines, blends, imports, or distributes
13 additional low-carbon fuel specified by the
14 Administrator; and

15 “(ii) for the use of the credits by the
16 generator, or the transfer of all or a por-
17 tion of the credits to another person, for
18 the purpose of complying with paragraph
19 (2).

20 “(6) WAIVERS.—

21 “(A) IN GENERAL.—The Administrator, in
22 consultation with the Secretary of Agriculture
23 and the Secretary of Energy, may waive the re-
24 quirements of this subsection in whole or in
25 part on petition by 1 or more States, by any

1 person subject to the requirements of this sub-
2 section, or by the Administrator on the Admin-
3 istrator’s own motion, by reducing the national
4 percentage of low-carbon fuel required under
5 paragraph (2)—

6 “(i) based on a determination by the
7 Administrator, after public notice and op-
8 portunity for comment, that implementa-
9 tion of the requirement would severely
10 harm the economy or environment of a
11 State, a region, or the United States; or

12 “(ii) based on a determination by the
13 Administrator, after public notice and op-
14 portunity for comment, that there is an in-
15 adequate domestic supply of low-carbon
16 fuel.

17 “(B) PETITIONS FOR WAIVERS.—The Ad-
18 ministrator, in consultation with the Secretary
19 of Agriculture and the Secretary of Energy,
20 shall approve or disapprove a petition for a
21 waiver of the requirements of paragraph (2) not
22 later than 90 days after the date on which the
23 petition is received by the Administrator.

24 “(C) TERMINATION OF WAIVERS.—A waiv-
25 er granted under subparagraph (A) shall termi-

1 nate after 1 year, but may be renewed by the
2 Administrator after consultation with the Sec-
3 retary of Agriculture and the Secretary of En-
4 ergy and after public notice and opportunity for
5 comment.

6 “(D) MODIFICATION OF APPLICABLE PER-
7 CENTAGES.—

8 “(i) IN GENERAL.—In the case of any
9 table established under this subsection, if
10 the Administrator waives at least 20 per-
11 cent of the applicable percentage require-
12 ment specified in the table for 2 consecu-
13 tive years, or at least 50 percent of the
14 percentage requirement for a single year,
15 the Administrator shall promulgate regula-
16 tions (not later than 1 year after issuing
17 the waiver) that modify the applicable vol-
18 umes specified in the table concerned for
19 all years following the final year to which
20 the waiver applies, except that no such
21 modification in applicable percentages shall
22 be made for any year before calendar year
23 2016.

24 “(ii) ADMINISTRATION.—In promul-
25 gating the regulations, the Administrator

1 shall comply with the processes, criteria,
2 and standards established under paragraph
3 (2)(B)(ii).

4 “(7) LOW-CARBON MARKET CONCENTRATION
5 ANALYSIS.—

6 “(A) ANALYSIS.—

7 “(i) IN GENERAL.—Not later than
8 January 1, 2015, and annually thereafter,
9 the Federal Trade Commission shall per-
10 form a market concentration analysis of
11 the low-carbon fuel production, import,
12 and distribution industries using the
13 Herfindahl-Hirschman Index to determine
14 whether there is sufficient competition
15 among industry participants to avoid price-
16 setting and other anticompetitive behavior.

17 “(ii) SCORING.—For the purpose of
18 scoring under clause (i) using the
19 Herfindahl-Hirschman Index, all mar-
20 keting arrangements among industry par-
21 ticipants shall be considered.

22 “(B) REPORT.—Not later than December
23 1, 2015, and annually thereafter, the Federal
24 Trade Commission shall submit to Congress
25 and the Administrator a report on the results

1 of the market concentration analysis performed
2 under subparagraph (A)(i).

3 “(8) PERIODIC REVIEWS.—To allow for the ap-
4 propriate adjustment of the requirements described
5 in paragraph (2)(B), the Administrator shall con-
6 duct periodic reviews of—

7 “(A) existing technologies;

8 “(B) the feasibility of achieving compliance
9 with the requirements; and

10 “(C) the impacts of the requirements of
11 this subsection on each individual and entity de-
12 scribed in paragraph (2).

13 “(9) EFFECT ON OTHER PROVISIONS.—

14 “(A) IN GENERAL.—Subject to subpara-
15 graph (B), nothing in this subsection, or regula-
16 tions promulgated under this subsection, affects
17 the regulatory status of carbon dioxide or any
18 other greenhouse gas, or expands or limits reg-
19 ulatory authority regarding carbon dioxide or
20 any other greenhouse gas, for purposes of other
21 provisions (including section 165) of this Act.

22 “(B) ADMINISTRATION.—Subparagraph
23 (A) shall not affect implementation and enforce-
24 ment of this subsection.”

1 (b) EFFECTIVE DATE.—The amendment made by
2 subsection (a) takes effect on January 1, 2015.

3 **SEC. 3. TRANSITION PROVISIONS.**

4 (a) DEFINITIONS.—Section 211(o)(1) of the Clean
5 Air Act (42 U.S.C. 7545(o)(1)) is amended—

6 (1) by striking subparagraph (A) and inserting
7 the following:

8 “(A) ADDITIONAL RENEWABLE FUEL.—

9 “(i) IN GENERAL.—The term ‘addi-
10 tional renewable fuel’ means fuel that—

11 “(I) is—

12 “(aa) produced from renew-
13 able biomass; or

14 “(bb) low-carbon fuel;

15 “(II) is used to replace or reduce
16 the quantity of fossil fuel present in—

17 “(aa) transportation fuel;

18 “(bb) home heating oil; or

19 “(cc) aviation jet fuel; and

20 “(III) has lifecycle greenhouse
21 gas emissions, as determined by the
22 Administrator, after notice and oppor-
23 tunity for comment, that are at least
24 20 percent less than baseline lifecycle
25 greenhouse gas emissions.”;

1 (2) by redesignating subparagraphs (I) through
2 (L) as subparagraphs (J) through (M), respectively;
3 and

4 (3) by inserting after subparagraph (H) the fol-
5 lowing:

6 “(I) LOW-CARBON FUEL.—The term ‘low-
7 carbon fuel’ means renewable fuel that has
8 lifecycle greenhouse gas emissions, as deter-
9 mined by the Administrator, after notice and
10 opportunity for comment, that are at least 20
11 percent less than baseline lifecycle greenhouse
12 gas emissions.”.

13 (b) CREDITS FOR ADDITIONAL RENEWABLE FUEL.—
14 Section 211(o)(5) of the Clean Air Act (42 U.S.C.
15 7545(o)(5)) is amended by striking subparagraph (A) and
16 inserting the following:

17 “(A) CREDITS FOR ADDITIONAL RENEW-
18 ABLE FUEL.—

19 “(i) IN GENERAL.—Not later than
20 180 days after the date of enactment of
21 the America’s Low-Carbon Fuel Standard
22 Act of 2009, the Administrator shall issue
23 regulations providing—

24 “(I) for the generation of an ap-
25 propriate quantity of credits by any

1 person that produces, refines, blends,
2 or imports additional renewable fuels
3 or low-carbon fuels specified by the
4 Administrator; and

5 “(II) for the use of the credits by
6 the generator, or the transfer of all or
7 a portion of the credits to another
8 person, for the purpose of complying
9 with paragraph (2).

10 “(ii) INCREASED CREDIT.—For each
11 of calendar years 2012 through 2014, the
12 Administrator shall increase the amount of
13 the credit provided under clause (i) in pro-
14 portion to the extent to which the lifecycle
15 greenhouse gas emissions of the additional
16 renewable fuel is less than baseline lifecycle
17 greenhouse gas emissions.”.

○