

110TH CONGRESS  
1ST SESSION

# S.1324

To amend the Clean Air Act to reduce greenhouse gas emissions from transportation fuel sold in the United States.

---

IN THE SENATE OF THE UNITED STATES

MAY 7, 2007

Mr. REID (for Mr. OBAMA (for himself and Mr. HARKIN)) 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 reduce greenhouse gas emissions from transportation fuel sold in the United States.

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 “National Low-Carbon  
5 Fuel Standard Act of 2007”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

8 (1) the dependence of the United States on im-  
9 ported oil imposes tremendous burdens on the econ-

1 omy, foreign policy, and military of the United  
2 States;

3 (2) according to the Energy Information Ad-  
4 ministration, 60 percent of the crude oil and petro-  
5 leum products consumed in the United States are  
6 imported;

7 (3) at a cost of approximately \$75 per barrel of  
8 oil, people in the United States remit more than  
9 \$600,000 per minute to other countries for crude oil  
10 and petroleum imports;

11 (4) a significant percentage of those imports  
12 originate in countries controlled by regimes that are  
13 unstable or openly hostile to the interests of the  
14 United States;

15 (5) dependence on oil production from those  
16 countries contributes to the volatility of domestic  
17 and global markets and corresponding increase in oil  
18 prices paid by consumers in the United States (com-  
19 monly known as a “risk premium”);

20 (6) the Energy Information Administration  
21 projects that the total petroleum demand in the  
22 United States will increase by 23 percent between  
23 2006 and 2026, while domestic crude oil production  
24 is expected to decrease by 11 percent, resulting in

1 an anticipated 28-percent increase in petroleum im-  
2 ports;

3 (7) absent significant action, the United States  
4 will become more vulnerable to oil price increases  
5 and more dependent on foreign oil;

6 (8)  $\frac{2}{3}$  of all domestic oil use occurs in the  
7 transportation sector, which is 97 percent reliant on  
8 petroleum-based fuels;

9 (9) passenger vehicles, including light trucks  
10 under 10,000 pounds gross vehicle weight, represent  
11 more than 60 percent of the oil used in the trans-  
12 portation sector;

13 (10) the oil used in the transportation sector  
14 accounts for approximately  $\frac{1}{3}$  of the emissions in  
15 the United States of the greenhouse gases that  
16 cause global warming;

17 (11) to avoid catastrophic global warming, the  
18 United States should take decisive action, in con-  
19 junction with other countries, to reduce greenhouse  
20 gas emissions by 60 to 80 percent from 1990 levels  
21 by 2050;

22 (12) transitioning the transportation sector in  
23 the United States to a more efficient use of low-car-  
24 bon petroleum alternatives is essential both to in-  
25 creasing domestic energy security and reducing glob-

1 al warming pollution, but that transition must be ac-  
2 complished while avoiding adverse impacts on the  
3 environment; and

4 (13) it is urgent, essential, and feasible to re-  
5 duce emissions of greenhouse gases, enhance na-  
6 tional security by reducing dependence on oil, and  
7 promote economic well-being without sacrificing  
8 land, water, and air quality by enacting energy poli-  
9 cies that motivate environmental performance.

10 **SEC. 3. RENEWABLE FUEL STANDARD.**

11 The table contained in section 211(o)(2)(B)(i) of the  
12 Clean Air Act (42 U.S.C. 7545(o)(2)(B)(i)) is amended—

13 (1) in the row expressing applicable volume of  
14 renewable fuel (in billions of gallons) for calendar  
15 year 2009, by striking “6.1” and inserting “12.0”;

16 (2) in the row expressing applicable volume of  
17 renewable fuel (in billions of gallons) for calendar  
18 year 2010, by striking “6.8” and inserting “13.0”;

19 (3) in the row expressing applicable volume of  
20 renewable fuel (in billions of gallons) for calendar  
21 year 2011, by striking “7.4” and inserting “14.0”;

22 and

23 (4) in the row expressing applicable volume of  
24 renewable fuel (in billions of gallons) for calendar  
25 year 2012, by striking “7.5” and inserting “15.0”.

1 **SEC. 4. NATIONAL LOW-CARBON FUEL STANDARD.**

2 (a) DEFINITIONS.—Section 241 of the Clean Air Act  
3 (42 U.S.C. 7581) is amended—

4 (1) by striking “For purposes of this part—”  
5 and inserting “In this part.”;

6 (2) by redesignating paragraphs (1), (2), (3),  
7 (4), (5), (6), and (7) as paragraphs (12), (2), (10),  
8 (1), (4), (5), and (3), respectively, and moving those  
9 paragraphs so as to appear in numerical order;

10 (3) by inserting after paragraph (5) (as redesignig-  
11 nated by paragraph (2)) the following:

12 “(6) FUEL EMISSION BASELINE.—The term  
13 ‘fuel emission baseline’ means the average lifecycle  
14 greenhouse gas emissions per unit of energy of the  
15 average of conventional transportation fuels in com-  
16 merce in the United States during the period of cal-  
17 endar years 2005 through 2007.

18 “(7) GREENHOUSE GAS.—The term ‘greenhouse  
19 gas’ means any of—

20 “(A) carbon dioxide;

21 “(B) methane;

22 “(C) nitrous oxide;

23 “(D) hydrofluorocarbons;

24 “(E) perfluorocarbons; and

25 “(F) sulfur hexafluoride.

1           “(8) LIFECYCLE GREENHOUSE GAS EMIS-  
2           SIONS.—The term ‘lifecycle greenhouse gas emis-  
3           sions’ means, with respect to a fuel, the aggregate  
4           quantity of greenhouse gases emitted during produc-  
5           tion, feedstock extraction, distribution, and use of  
6           the fuel, as determined by the Administrator.

7           “(9) LOW-CARBON FUEL.—

8           “(A) IN GENERAL.—The term ‘low-carbon  
9           fuel’ means fuel produced, to the maximum ex-  
10          tent practicable, in the United States—

11                   “(i) that meets the requirements of an  
12                   appropriate American Society for Testing  
13                   and Materials standard; and

14                   “(ii) the lifecycle greenhouse gas emis-  
15                   sions of which are lower than the fuel  
16                   emission baseline, as determined by the  
17                   Administrator.

18          “(B) EXCLUSIONS.—The term ‘low-carbon  
19          fuel’ does not include fuel produced from bio-  
20          mass derived from—

21                   “(i) designated national interest land  
22                   (such as land included in a national wild-  
23                   life refuge, national park, national monu-  
24                   ment, national forest, or national grass-  
25                   land); or

1 “(ii) any—  
2 “(I) old-growth forest;  
3 “(II) roadless area within a na-  
4 tional forest;  
5 “(III) wilderness study area;  
6 “(IV) protected native grassland;  
7 or  
8 “(V) lawfully designated intact,  
9 rare, threatened, or endangered eco-  
10 system.”; and

11 (4) by inserting after paragraph (10) (as reded-  
12 icated by paragraph (2)) the following:

13 “(11) OBLIGATED PARTY.—

14 “(A) IN GENERAL.—The term ‘obligated  
15 party’ means an obligated party as described in  
16 section 80.1106 of title 40, Code of Federal  
17 Regulations (or a successor regulation).

18 “(B) RELATED TERM.—The term ‘any and  
19 all of the products’, when used with respect to  
20 an obligated party, means diesel and aviation  
21 fuel to be included in the volume used to cal-  
22 culate the requirements applicable to the obli-  
23 gated party under section 250.”.

1 (b) NATIONAL LOW-CARBON FUEL STANDARD.—  
2 Part C of title II of the Clean Air Act (42 U.S.C. 7581  
3 et seq.) is amended—

4 (1) by redesignating section 250 (42 U.S.C.  
5 7590) as section 251; and

6 (2) by inserting after section 249 (42 U.S.C.  
7 7589) the following:

8 **“SEC. 250. NATIONAL LOW-CARBON FUEL STANDARD.**

9 “(a) IN GENERAL.—Not later than January 1, 2009,  
10 the Administrator shall, by regulation—

11 “(1) establish a fuel emission baseline based on  
12 the average lifecycle greenhouse gas emissions per  
13 unit of energy of the average of conventional trans-  
14 portation fuels in commerce in the United States  
15 during the period of calendar years 2005 through  
16 2007;

17 “(2) identify qualifying low-carbon transpor-  
18 tation fuels based on—

19 “(A) whether the lifecycle greenhouse gas  
20 emissions of a fuel are lower, per unit of energy  
21 delivered by use of a specific quantity of the  
22 fuel, than the fuel emission baseline, including  
23 the percentage greenhouse gas emission reduc-  
24 tion provided by the fuel to the fuel emission  
25 baseline;

1 “(B) whether a fuel—

2 “(i) achieves a substantial reduction  
3 in petroleum content over the lifecycle of  
4 the fuel; and

5 “(ii) otherwise contributes to the en-  
6 ergy security of the United States; and

7 “(C) with respect to calculation of the  
8 lifecycle greenhouse gas emissions of the fuels  
9 used in vehicles that run on electricity or a hy-  
10 drogen fuel, the quantity of energy delivered by  
11 use of the fuel, which shall be determined by  
12 calculating the product obtained by multi-  
13 plying—

14 “(i) a unit of energy delivered by use  
15 of the electricity or hydrogen fuel; and

16 “(ii) an adjustment factor determined  
17 by the Administrator to reflect the sub-  
18 stantial lifecycle greenhouse gas benefits of  
19 using the electricity or hydrogen fuel, on a  
20 per-mile basis, resulting from reasonably  
21 anticipated energy efficiency of an aver-  
22 age—

23 “(I) battery electric vehicle;

24 “(II) plug-in hybrid electric vehi-  
25 cle; or

1                                   “(III) hydrogen fuel cell vehicle;

2                                   and

3                                   “(3) establish a low-carbon fuel certification  
4 and marketing process—

5                                   “(A) to certify fuels that qualify as low-  
6 carbon fuels under this section;

7                                   “(B) to make those certifications available  
8 to consumers; and

9                                   “(C) to label and market low-carbon fuels.

10                                  “(b) ENVIRONMENTAL SUSTAINABILITY STAND-  
11 ARDS.—Not later than January 1, 2012, the Adminis-  
12 trator shall also identify qualifying low-carbon transpor-  
13 tation fuels based on environmental sustainability stand-  
14 ards established under section 211(t)(2)(B).

15                                  “(c) REQUIREMENTS APPLICABLE TO OBLIGATED  
16 PARTIES.—

17                                   “(1) REQUIREMENTS.—

18                                   “(A) CALENDAR YEARS 2010 THROUGH  
19 2024.—Not later than January 1, 2010, the Ad-  
20 ministrator shall, by regulation, require each  
21 obligated party to reduce, through the use of  
22 low-carbon fuels and improvements in the pro-  
23 duction of conventional fuels, the average  
24 lifecycle greenhouse gas emissions per unit of  
25 energy of the aggregate quantity of fuels intro-

1           duced into commerce by the obligated party to  
2           a level that is, as determined by the Adminis-  
3           trator, to the maximum extent practicable—

4                   “(i) by calendar year 2011, substan-  
5                   tially equivalent to the fuel emission base-  
6                   line;

7                   “(ii) by calendar year 2015, substan-  
8                   tially equivalent to at least 5 percent below  
9                   the fuel emission baseline; and

10                   “(iii) by calendar year 2020, substan-  
11                   tially equivalent to at least 10 percent  
12                   below the fuel emission baseline.

13                   “(B) CALENDAR YEAR 2025 AND THERE-  
14                   AFTER.—For calendar year 2025, and by not  
15                   later than each fifth calendar year thereafter,  
16                   the Administrator shall, by regulation, require  
17                   each obligated party to reduce the average  
18                   lifecycle greenhouse gas emissions per unit of  
19                   energy of the aggregate quantity of fuels intro-  
20                   duced into commerce by the obligated party to  
21                   a level that is, as determined by the Adminis-  
22                   trator, at least 13 percent below the fuel emis-  
23                   sion baseline (with respect to calendar year  
24                   2025), and at least 2 percent below the most  
25                   recent percentage reduction (with respect to

1 each fifth calendar year thereafter), unless the  
2 Administrator, in coordination with the Sec-  
3 retary of Agriculture and the Secretary of En-  
4 ergy, establishes an alternative required per-  
5 centage reduction based on—

6 “(i) a review of the implementation of  
7 this paragraph during the period of cal-  
8 endar years 2010 through 2020;

9 “(ii) the expected annual rate of fu-  
10 ture production of low-carbon fuel, and  
11 Category I ultra-low carbon fuel and Cat-  
12 egory II ultra-low carbon fuel (as those  
13 terms are defined in subsection (p)); and

14 “(iii) the practicability of complying  
15 with environmental sustainability stand-  
16 ards referred to in subsection (b).

17 “(2) FAILURE TO PROMULGATE REGULA-  
18 TIONS.—If the Administrator does not promulgate  
19 regulations in accordance with this subsection, the  
20 average lifecycle greenhouse gas emissions of the ag-  
21 gregate quantity of fuel introduced by an obligated  
22 party for calendar year 2012 shall be at least 3 per-  
23 cent below the average lifecycle greenhouse gas emis-  
24 sions of gasoline in commerce in the United States  
25 during calendar year 2007.

1           “(3) TEMPORARY SUSPENSION.—An obligated  
2 party may apply to the Administrator to receive a  
3 temporary suspension of the requirement to comply  
4 with this subsection if the obligated party dem-  
5 onstrates to the satisfaction of the Administrator  
6 that events outside of the control of the obligated  
7 party could lead or have led to supply disruptions in  
8 the transportation fuel supply of the United States.

9           “(4) ENFORCEMENT; PENALTIES.—In carrying  
10 out this subsection, the Administrator—

11                 “(A) shall enforce this subsection in ac-  
12 cordance with the authority of the Adminis-  
13 trator to enforce this Act; and

14                 “(B) may commence a civil action and as-  
15 sess and collect penalties in accordance with the  
16 amounts and under the authority described in  
17 section 205.

18           “(d) CREDITS.—

19                 “(1) IN GENERAL.—The regulations promul-  
20 gated to carry out this section shall permit obligated  
21 parties to receive credits for achieving, during a cal-  
22 endar year, greater reductions in lifecycle green-  
23 house gas emissions of the fuel produced, distrib-  
24 uted, or imported by the obligated party than are re-  
25 quired under subsection (c).

1           “(2) METHOD OF CALCULATION.—The number  
2 of credits received by an obligated party described in  
3 paragraph (1) for a calendar year shall be calculated  
4 by multiplying—

5                   “(A) the aggregate quantity of fuel pro-  
6 duced, distributed, or imported by the obligated  
7 party in the calendar year; and

8                   “(B) the difference between—

9                           “(i) the lifecycle greenhouse gas emis-  
10 sions of that quantity of fuel; and

11                           “(ii) the maximum lifecycle green-  
12 house gas emissions of that quantity of  
13 fuel permitted for the calendar year under  
14 subsection (c).”.

15 **SEC. 5. ULTRA-LOW CARBON FUEL STANDARD.**

16           (a) IN GENERAL.—Section 211 of the Clean Air Act  
17 (42 U.S.C. 7545) is amended—

18                   (1) by redesignating the first subsection (r) (re-  
19 lating to fuel and fuel additive importers and impor-  
20 tation) as subsection (v) and moving that subsection  
21 so as to appear at the end of the section; and

22                   (2) by inserting after subsection (o) the fol-  
23 lowing:

24                   “(p) ULTRA-LOW CARBON FUEL STANDARD.—

1           “(1) DEFINITIONS.—In this subsection and  
2 subsection (t):

3           “(A) CATEGORY I ULTRA-LOW CARBON  
4 FUELS.—

5           “(i) IN GENERAL.—The term ‘Cat-  
6 egory I ultra-low carbon fuel’ means fuel  
7 produced in the United States—

8           “(I) that meets the requirements  
9 of an appropriate American Society  
10 for Testing and Materials standard;  
11 and

12           “(II) the lifecycle greenhouse gas  
13 emissions of which are at least 50 per-  
14 cent lower than the average lifecycle  
15 greenhouse gas emissions of conven-  
16 tional transportation fuel, as deter-  
17 mined by the Administrator.

18           “(ii) EXCLUSIONS.—The term ‘Cat-  
19 egory I ultra-low carbon fuel’ does not in-  
20 clude fuel produced from biomass derived  
21 from—

22           “(I) designated national interest  
23 land (such as land included in a na-  
24 tional wildlife refuge, national park,

1 national monument, national forest,  
2 or national grassland); or

3 “(II) any—

4 “(aa) old-growth forest;

5 “(bb) roadless area within a  
6 national forest;

7 “(cc) wilderness study area;

8 “(dd) protected native grass-  
9 land; or

10 “(ee) lawfully-designated in-  
11 tact, rare, threatened, or endan-  
12 gered ecosystem.

13 “(B) CATEGORY II ULTRA-LOW CARBON  
14 FUEL.—

15 “(i) IN GENERAL.—The term ‘Cat-  
16 egory II ultra-low carbon fuel’ means any  
17 fuel produced in the United States—

18 “(I) that meets the requirements  
19 of an appropriate American Society  
20 for Testing and Materials standard;  
21 and

22 “(II) the average lifecycle green-  
23 house gas emissions of which are at  
24 least 75 percent lower than the aver-  
25 age lifecycle greenhouse gas emissions

1 of conventional transportation fuel, as  
 2 determined by the Administrator.

3 “(ii) EXCLUSIONS.—The term ‘Cat-  
 4 egory II ultra-low carbon fuel’ does not in-  
 5 clude fuel produced from biomass derived  
 6 from—

7 “(I) designated national interest  
 8 land (such as land included in a na-  
 9 tional wildlife refuge, national park,  
 10 national monument, national forest,  
 11 or national grassland); or

12 “(II) any—

13 “(aa) old-growth forest;

14 “(bb) roadless area within a  
 15 national forest;

16 “(cc) wilderness study area;

17 “(dd) protected native grass-  
 18 land; or

19 “(ee) lawfully designated in-  
 20 tact, rare, threatened, or endan-  
 21 gered ecosystem.

22 “(C) CONVENTIONAL TRANSPORTATION  
 23 FUEL.—The term ‘conventional transportation  
 24 fuel’ means any fossil-fuel based transportation

1 fuel used in the United States as of the date of  
2 enactment of this subsection.

3 “(D) LOW-CARBON FUEL.—The term ‘low-  
4 carbon fuel’ has the meaning given the term in  
5 section 241.

6 “(2) ULTRA-LOW CARBON FUEL.—

7 “(A) REGULATIONS.—

8 “(i) IN GENERAL.—Not later than 3  
9 years after the date of enactment of this  
10 subsection, the Administrator shall promul-  
11 gate regulations to ensure that fuel sold or  
12 introduced into commerce in the United  
13 States (except in noncontiguous States or  
14 territories), on an annual average basis,  
15 contains at least the applicable volume of  
16 ultra-low carbon fuel determined in accord-  
17 ance with subparagraph (B).

18 “(ii) PROVISIONS OF REGULATIONS.—  
19 Regardless of the date of promulgation,  
20 the regulations promulgated under clause  
21 (i)—

22 “(I) shall contain compliance pro-  
23 visions applicable to obligated parties,  
24 as appropriate, to ensure that the re-

1 requirements of this paragraph are met;  
 2 but  
 3 “(II) shall not—  
 4 “(aa) restrict geographic  
 5 areas in which low-carbon trans-  
 6 portation fuel and ultra-low car-  
 7 bon fuel may be used; or  
 8 “(bb) impose any per-gallon  
 9 obligation for the use of those  
 10 fuels.  
 11 “(B) APPLICABLE VOLUME.—  
 12 “(i) CALENDAR YEARS 2012 THROUGH  
 13 2025.—For the purpose of subparagraph  
 14 (A), the applicable volume of Category I  
 15 ultra-low carbon fuel and Category II  
 16 ultra-low carbon fuel for any of calendar  
 17 years 2012 through 2025 shall be deter-  
 18 mined in accordance with the following  
 19 table:

Calendar Year	Total applicable volume of Category I ultra-low carbon fuel (billions of gallons)	Total applicable volume of Category II ultra-low carbon fuel (billions of gallons)
2012	0.5	0.25
2014	1.5	0.75
2016	3.0	1.5
2018	5.0	2.5
2020	8.0	4.0
2022	11.0	6.0
2025	13.0	8.0

1           “(ii) CALENDAR YEAR 2026 AND  
2           THEREAFTER.—Subject to clause (iii), the  
3           applicable volume for calendar year 2026  
4           and each calendar year thereafter shall be  
5           determined by the Administrator, in co-  
6           ordination with the Secretary of Agri-  
7           culture and the Secretary of Energy, based  
8           on a review of the implementation of the  
9           program under this subsection during the  
10          period of calendar years 2012 through  
11          2025, including a review of—

12                   “(I) the impact of the use of Cat-  
13                   egory I ultra-low carbon fuel and Cat-  
14                   egory II ultra-low carbon fuel on—

15                           “(aa) environmental sustain-  
16                           ability standards established  
17                           under subsection (t)(2)(B);

18                           “(bb) energy security; and

19                           “(cc) job creation; and

20                   “(II) the expected annual rate of  
21                   future production of those fuels for  
22                   use as blending components or re-  
23                   placements for a certain quantity of  
24                   conventional fuel in the United States.

1           “(iii) MINIMUM APPLICABLE VOL-  
2           UME.—For the purpose of subparagraph  
3           (A), the applicable volume for calendar  
4           year 2026 and each calendar year there-  
5           after shall be equal to the product obtained  
6           by multiplying—

7                   “(I) the number of gallons of  
8                   conventional transportation fuel that  
9                   the Administrator estimates will be  
10                  sold or introduced into commerce dur-  
11                  ing the calendar year; and

12                  “(II) the ratio that—

13                          “(aa) for the applicable vol-  
14                          ume of Category I ultra-low car-  
15                          bon fuel, 13,000,000,000 gallons  
16                          of that fuel bears to the total  
17                          number of gallons of conventional  
18                          transportation fuel sold or intro-  
19                          duced into commerce in the  
20                          United States in calendar year  
21                          2025; and

22                          “(bb) for the applicable vol-  
23                          ume of Category II ultra-low car-  
24                          bon fuel, 8,000,000,000 gallons  
25                          of that fuel bears to the total

1 number of gallons of conventional  
2 transportation fuel sold or intro-  
3 duced into commerce in the  
4 United States in calendar year  
5 2025.

6 “(3) APPLICABLE PERCENTAGES.—

7 “(A) PROVISION OF ESTIMATE OF VOL-  
8 UMES OF CONVENTIONAL FUELS SALES.—Not  
9 later than October 31 of each of calendar years  
10 2011 through 2025, the Administrator of the  
11 Energy Information Administration shall pro-  
12 vide to the Administrator an estimate, with re-  
13 spect to the following calendar year, of the vol-  
14 umes of conventional fuels projected to be sold  
15 or introduced into commerce in the United  
16 States.

17 “(B) DETERMINATION OF APPLICABLE  
18 PERCENTAGES.—

19 “(i) IN GENERAL.—Not later than  
20 November 30 of each of calendar years  
21 2012 through 2025, based on the estimate  
22 provided under subparagraph (A), the Ad-  
23 ministrator shall determine and publish in  
24 the Federal Register, with respect to the  
25 following calendar year, the fuel obligations

1 that would meet the requirements of para-  
2 graph (2).

3 “(ii) REQUIRED ELEMENTS.—The fuel  
4 obligations determined for a calendar year  
5 under clause (i) shall—

6 “(I) subject to subparagraph (C),  
7 be applicable to obligated parties, as  
8 appropriate; and

9 “(II) be expressed in terms of a  
10 volume percentage of conventional  
11 fuels sold or introduced into com-  
12 merce in the United States.

13 “(C) ADJUSTMENTS.—In determining the  
14 applicable percentage for a calendar year, the  
15 Administrator shall make adjustments to pre-  
16 vent the imposition of redundant obligations on  
17 any obligated party.

18 “(4) CREDIT PROGRAM.—

19 “(A) IN GENERAL.—The regulations pro-  
20 mulgated pursuant to paragraph (2)(A) shall  
21 provide for the generation of an appropriate  
22 quantity of credits by obligated parties that in-  
23 cludes a quantity of Category I ultra-low carbon  
24 fuel or Category II ultra-low carbon fuel that is

1 greater than the applicable quantity required  
2 under paragraph (2).

3 “(B) USE OF CREDITS.—A person that  
4 generates a credit under subparagraph (A) may  
5 use the credit, or transfer all or a portion of the  
6 credit to another person, for the purpose of  
7 complying with regulations promulgated pursu-  
8 ant to paragraph (2)(A).

9 “(C) DURATION OF CREDITS.—A credit  
10 generated under this paragraph shall be valid—

11 “(i) during the calendar year in which  
12 the credit was generated; and

13 “(ii) for the 2-year period following  
14 that calendar year.

15 “(D) INABILITY TO GENERATE OR PUR-  
16 CHASE SUFFICIENT CREDITS.—The regulations  
17 promulgated pursuant to paragraph (2)(A)  
18 shall include provisions allowing any person  
19 that is unable to generate or purchase sufficient  
20 credits under subparagraph (A) to meet the re-  
21 quirements of paragraph (2) by carrying for-  
22 ward a credit generated during a previous year  
23 on the condition that the person, during the cal-  
24 endar year following the year in which the  
25 ultra-low carbon fuel deficit is created—

1           “(i) achieves compliance with the fuel  
2 requirements under paragraph (2); and

3           “(ii) generates or purchases additional  
4 credits under subparagraph (A) to offset  
5 the deficit of the previous year.

6           “(5) WAIVERS.—

7           “(A) IN GENERAL.—The Administrator, in  
8 consultation with the Secretary of Agriculture  
9 and the Secretary of Energy, may waive the re-  
10 quirements of paragraph (2), in whole or in  
11 part, on receipt of a petition of 1 or more  
12 States by reducing the national quantity of Cat-  
13 egory I ultra-low carbon fuel or Category II  
14 ultra-low carbon fuel in the conventional trans-  
15 portation fuel pool required under paragraph  
16 (2) based on a determination by the Adminis-  
17 trator, after public notice and opportunity for  
18 comment, that—

19           “(i) implementation of the require-  
20 ment would severely harm the economy or  
21 environment of a State, a region, or the  
22 United States; or

23           “(ii) there is an inadequate domestic  
24 supply of the applicable ultra-low carbon  
25 fuel.

1           “(B) PETITIONS FOR WAIVERS.—Not later  
2 than 90 days after the date on which the Ad-  
3 ministrator receives a petition under subpara-  
4 graph (A), the Administrator, in consultation  
5 with the Secretary of Agriculture and the Sec-  
6 retary of Energy, shall approve or disapprove  
7 the petition.

8           “(C) TERMINATION OF WAIVERS.—

9           “(i) IN GENERAL.—Except as pro-  
10 vided in clause (ii), a waiver under sub-  
11 paragraph (A) shall terminate on the date  
12 that is 1 year after the date on which the  
13 waiver is provided.

14           “(ii) EXCEPTION.—The Adminis-  
15 trator, in consultation with the Secretary  
16 of Agriculture and the Secretary of En-  
17 ergy, may extend a waiver under subpara-  
18 graph (A), as the Administrator deter-  
19 mines to be appropriate.”.

20           (b) CREDIT FOR CELLULOSIC ETHANOL.—Section  
21 211(o)(4) of the Clean Air Act (42 U.S.C. 7545(o)(4)) is  
22 amended by inserting “through calendar year 2017,” be-  
23 fore “1 gallon”.

1 (c) PERFORMANCE STANDARDS.—Section 211 of the  
2 Clean Air Act (42 U.S.C. 7545) is amended by inserting  
3 after subsection (s) the following:

4 “(t) PERFORMANCE STANDARDS.—

5 “(1) INTENSITY AND INDEX NUMBERS.—Not  
6 later than 2 years after the date of enactment of  
7 this subsection, the Administrator shall establish, for  
8 fuels blended with low-carbon fuel, and Category I  
9 ultra-low carbon fuel and Category II ultra-low car-  
10 bon fuel, as part of the renewable identification  
11 number program of the Environmental Protection  
12 Agency—

13 “(A) a carbon intensity number measured  
14 in the quantity of lifecycle greenhouse gas emis-  
15 sions per unit of energy provided by use of the  
16 fuel; and

17 “(B) a green index number representing  
18 the percentage reduction of greenhouse gas  
19 emissions achieved by the fuel as compared to  
20 the fuel emission baseline (as defined in section  
21 241).

22 “(2) ENVIRONMENTAL SUSTAINABILITY  
23 STUDY.—

24 “(A) IN GENERAL.—Not later than 3 years  
25 after the date of enactment of this subsection,

1 the Administrator, in conjunction with the Sec-  
2 retary of Agriculture and the Secretary of En-  
3 ergy, and based on recommendations issued by  
4 the National Academy of Sciences, the Food  
5 and Agricultural Policy Research Institute, and  
6 not more than 2 other appropriate independent  
7 research institutes, as determined by the Ad-  
8 ministrator, shall establish a methodology to as-  
9 sess and quantify environmental changes associ-  
10 ated with an increase in the volume of fuels re-  
11 quired by this section, as compared with the ef-  
12 fects of an increase in conventional transpor-  
13 tation fuels otherwise displaced by this section,  
14 as applicable, for the purpose of negating over-  
15 all adverse environmental impacts, particularly  
16 with respect to the effects on or changes in—

17 “(i) land, air, and water quality, and  
18 quality of other resources, including  
19 changes resulting from production, han-  
20 dling, and transportation of fuel (and asso-  
21 ciated effects on public health and safety);

22 “(ii) land use patterns;

23 “(iii) the rate of deforestation, in the  
24 United States and globally;

1           “(iv) areas containing significant con-  
2           centrations of biodiversity values (including  
3           endemism, endangered species, high spe-  
4           cies richness, and refugia), including habi-  
5           tats in which any alteration of the habitat  
6           would render the habitat unable to support  
7           most characteristic native species and eco-  
8           logical processes;

9           “(v) land enrolled in the conservation  
10          reserve program established under sub-  
11          chapter B of chapter 1 of subtitle D of  
12          title XII of the Food Security Act of 1985  
13          (16 U.S.C. 3831 et seq.) or the wetlands  
14          reserve program established under sub-  
15          chapter C of chapter 1 of subtitle D of  
16          title XII of the Food Security Act of 1985  
17          (16 U.S.C. 3837 et seq.);

18          “(vi) the long-term capacity of the  
19          United States to produce biomass feed-  
20          stocks;

21          “(vii) the impact on areas at risk of  
22          wildfire, including the vicinity of buildings  
23          and other areas regularly occupied by peo-  
24          ple, or of infrastructure;

1           “(viii) the effects on materials pro-  
2           duced, acquired, transported, or processed  
3           that would require an exemption from oth-  
4           erwise applicable Federal law (including  
5           regulations);

6           “(ix) the conversion of nonrenewable  
7           biomass into biofuel;

8           “(x) the conversion of biowaste and  
9           other wastes into fuels (as compared with  
10          use of those wastes for other beneficial  
11          purposes (such as recycling postconsumer  
12          waste paper), and any potential for the  
13          generation of toxic byproducts resulting  
14          from that conversion (such as painted,  
15          treated, or pressurized wood, or wood con-  
16          taminated with plastic or metals);

17          “(xi) designated national interest land  
18          (including land that is within the National  
19          Wildlife Refuge System, the National Park  
20          System, a National Monument, the Na-  
21          tional Wilderness Preservation System, the  
22          National Landscape Conservation System,  
23          or the National Forest System, or that is  
24          otherwise under the administrative juris-  
25          diction of the Secretary of the Interior or

1 Secretary of Agriculture or protected by  
2 Federal law); and

3 “(xii) such other matters or activities  
4 as are identified by the Administrator.

5 “(B) ENVIRONMENTAL SUSTAINABILITY  
6 STANDARDS.—Not later than January 1, 2012,  
7 the Administrator, in conjunction with the Sec-  
8 retary of Agriculture and the Secretary of En-  
9 ergy, shall, based on the methodology estab-  
10 lished under subparagraph (A), promulgate reg-  
11 ulations to establish a set of standards to mini-  
12 mize, to the maximum extent practicable, the  
13 negative environmental impacts and ensure long  
14 term resource sustainability from the sourcing  
15 and production of low-carbon fuels.

16 “(u) STATE AUTHORITY.—If the Administrator de-  
17 termines that a State law (including a regulation) provides  
18 for equivalent or greater greenhouse gas emission reduc-  
19 tions than any provision in section 250 or subsection (p)  
20 or (t) of this section, the State law shall apply in the State  
21 in lieu of the provision.”.

22 (d) PENALTIES AND ENFORCEMENT.—Section  
23 211(d) of the Clean Air Act (42 U.S.C. 7545(d)) is  
24 amended—

1           (1) in paragraph (1), by striking “or (o)” each  
2           place it appears and inserting “(o), or (p)”;

3           (2) in paragraph (2), by striking “and (o)”  
4           each place it appears and inserting “(o), and (p)”.

5           (e) TECHNICAL AMENDMENTS.—Section 211 of the  
6 Clean Air Act (42 U.S.C. 7545) is amended—

7           (1) in subsection (i)(4), by striking “section  
8           324” each place it appears and inserting “section  
9           325”;

10          (2) in subsection (k)(10), by indenting subpara-  
11          graphs (E) and (F) appropriately;

12          (3) in subsection (n), by striking “section  
13          219(2)” and inserting “section 216(2)”;

14          (4) in subsection (s)(1), by striking “this sub-  
15          title” and inserting “this part”.

○