

110TH CONGRESS  
1ST SESSION

# H. R. 547

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## AN ACT

To facilitate the development of markets for biofuels and Ultra Low Sulfur Diesel fuel through research and development and data collection.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Advanced Fuels Infra-  
3 structure Research and Development Act”.

4 **SEC. 2. FINDINGS.**

5 The Congress finds that—

6 (1) in order to lessen United States dependence  
7 on foreign sources of petroleum, and decrease de-  
8 mand for petroleum in the transportation sector, the  
9 Nation must diversify its fuel supply to include do-  
10 mestically produced biofuels including hydrogen;

11 (2) while ethanol has been successful in the  
12 market place as a fuel additive, newer biofuels may  
13 present unique challenges that may render the fuels  
14 incompatible with the current fuel transportation  
15 and delivery infrastructure, placing the burden of  
16 costly refurbishment and construction on fuel dis-  
17 tributors and retailers;

18 (3) chemical additives to the fuels may mitigate  
19 the negative impacts of some biofuels on existing in-  
20 frastructure and preclude costly retrofitting or in-  
21 stallation of new biofuel compatible infrastructure  
22 and transportation systems;

23 (4) in order to mitigate air pollution and com-  
24 ply with Federal mandates, Ultra Low Sulfur Diesel  
25 fuel was introduced into the marketplace in 2006;

1           (5) fuel labeled Ultra Low Sulfur Diesel may  
2           accumulate more than the statutory limit of 15  
3           parts per million of sulfur when transported through  
4           multiple pipelines, tanks, and trucks to the final  
5           point of sale;

6           (6) fuel distributors and retailers may inadvert-  
7           ently take delivery of fuel labeled Ultra Low Sulfur  
8           Diesel with more than 15 parts per million of sulfur  
9           without a practical means of verifying sulfur con-  
10          tent; and

11          (7) fuel distributors and retailers may trans-  
12          form their business by dispensing hydrogen, re-  
13          formed on site from various feedstocks, or delivered  
14          by pipeline or tube trucks, resulting in new storage,  
15          handling, and equipment challenges.

16 **SEC. 3. BIOFUEL INFRASTRUCTURE AND ADDITIVES RE-**  
17 **SEARCH AND DEVELOPMENT.**

18          The Assistant Administrator of the Office of Re-  
19          search and Development of the Environmental Protection  
20          Agency (in this Act referred to as the “Assistant Adminis-  
21          trator”), in consultation with the Secretary of Energy and  
22          the National Institute of Standards and Technology, shall  
23          carry out a program of research and development of mate-  
24          rials to be added to biofuels to make them more compat-  
25          ible with existing infrastructure used to store and deliver

1 petroleum-based fuels to the point of final sale. The As-  
2 sistant Administrator is encouraged to utilize Land Grant  
3 Institutions, Historically Black Colleges and Universities,  
4 Hispanic Serving Institutions, and other minority-serving  
5 institutions among other resources to undertake research  
6 for this program. The program shall address—

7 (1) materials to prevent or mitigate—

8 (A) corrosion of metal, plastic, rubber,  
9 cork, fiberglass, glues, or any other material  
10 used in pipes and storage tanks;

11 (B) dissolving of storage tank sediments;

12 (C) clogging of filters;

13 (D) contamination from water or other  
14 adulterants or pollutants;

15 (E) poor flow properties related to low  
16 temperatures;

17 (F) oxidative and thermal instability in  
18 long-term storage and use;

19 (G) microbial contamination; and

20 (H) problems associated with electrical  
21 conductivity;

22 (2) alternatives to conventional methods for re-  
23 furbishment and cleaning of gasoline and diesel  
24 tanks, including tank lining applications;

1           (3) strategies to minimize emissions from infra-  
2 structure;

3           (4) issues with respect to certification by a na-  
4 tionally recognized testing laboratory of components  
5 for fuel dispensing devices that specifically reference  
6 compatibility with alcohol blended and other biofuels  
7 that contain greater than 15 percent alcohol;

8           (5) challenges for design, reforming, storage,  
9 handling, and dispensing hydrogen fuel from various  
10 feedstocks, including biomass, from neighborhood  
11 fueling stations, including codes and standards de-  
12 velopment necessary beyond that carried out under  
13 section 809 of the Energy Policy Act of 2005 (42  
14 U.S.C. 16158);

15           (6) issues with respect to where in the fuel sup-  
16 ply chain additives optimally should be added to  
17 fuels; and

18           (7) other problems as identified by the Assist-  
19 ant Administrator, in consultation with the Sec-  
20 retary of Energy and the National Institute of  
21 Standards and Technology.

22 **SEC. 4. SULFUR TESTING FOR DIESEL FUELS.**

23           (a) PROGRAM.—The Assistant Administrator, in con-  
24 sultation with the National Institute of Standards and  
25 Technology, shall carry out a research, development, and

1 demonstration program on portable, low-cost, and accu-  
2 rate methods and technologies for testing of sulfur content  
3 in fuel, including Ultra Low Sulfur Diesel and Low Sulfur  
4 Diesel.

5 (b) SCHEDULE OF DEMONSTRATIONS.—Not later  
6 than 1 year after the date of enactment of this Act, the  
7 Assistant Administrator shall begin demonstrations of  
8 technologies under subsection (a).

9 **SEC. 5. STANDARD REFERENCE MATERIALS AND DATA**  
10 **BASE DEVELOPMENT.**

11 Not later than 6 months after the date of enactment  
12 of this Act, the National Institute of Standards and Tech-  
13 nology shall develop a physical properties data base and  
14 standard reference materials for biofuels. Such data base  
15 and standard reference materials shall be maintained and  
16 updated as appropriate as additional biofuels become  
17 available.

18 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS SUBJECT TO**  
19 **PAY AS YOU GO.**

20 There are authorized to be appropriated to the Envi-  
21 ronmental Protection Agency \$10,000,000 for carrying  
22 out this Act, to be derived from amounts otherwise appro-  
23 priated to the Environmental Protection Agency for en-  
24 ergy research, development, and demonstration activities

1 related to fuels or environmental research and develop-  
2 ment activities related to fuels.

3 **SEC. 7. REPORT TO CONGRESS.**

4 Not later than 1 year after the establishment of the  
5 program under this Act, the Secretary of Energy shall  
6 transmit a report to Congress containing suggestions for  
7 any Federal incentives that could help such program be  
8 more successful.

9 **SEC. 8. ADDITIONAL FINDING.**

10 The Congress also finds that in order to lessen  
11 United States dependence on foreign sources of petroleum,  
12 and decrease demand for petroleum in aircraft, such as  
13 passenger planes with 42 business class seats capable of  
14 transcontinental flights, the Nation must diversify its fuel  
15 supply for aircraft to include domestically produced alter-  
16 native fuels.

17 **SEC. 9. ADDITIONAL ISSUES.**

18 Research and development under this Act shall ad-  
19 dress issues with respect to increased volatile emissions  
20 or increased nitrogen oxide emissions.

Passed the House of Representatives February 8,  
2007.

Attest:

*Clerk.*

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