

109TH CONGRESS  
1ST SESSION

# S. 1210

To enhance the national security of the United States by providing for the research, development, demonstration, administrative support, and market mechanisms for widespread deployment and commercialization of biobased fuels and biobased products, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

JUNE 9, 2005

Mr. HARKIN (for himself, Mr. LUGAR, Mr. OBAMA, and Mr. COLEMAN) introduced the following bill; which was read twice and referred to the Committee on Agriculture, Nutrition, and Forestry

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## A BILL

To enhance the national security of the United States by providing for the research, development, demonstration, administrative support, and market mechanisms for widespread deployment and commercialization of biobased fuels and biobased products, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the  
5 “National Security and Bioenergy Investment Act of  
6 2005”.

1 (b) TABLE OF CONTENTS.—The table of contents of  
 2 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings.
- Sec. 3. Definitions.

#### TITLE I—BIOMASS RESEARCH AND DEVELOPMENT

- Sec. 101. Definitions.
- Sec. 102. Cooperation and coordination in biomass research and development.
- Sec. 103. Biomass Research and Development Board.
- Sec. 104. Biomass Research and Development Technical Advisory Committee.
- Sec. 105. Biomass Research and Development Initiative.
- Sec. 106. Reports.
- Sec. 107. Funding.
- Sec. 108. Termination of authority.
- Sec. 109. Biomass-derived hydrogen.

#### TITLE II—PRODUCTION INCENTIVES

- Sec. 201. Production incentives.

#### TITLE III—ASSISTANT SECRETARY OF AGRICULTURE FOR ENERGY AND BIOBASED PRODUCTS

- Sec. 301. Assistant Secretary of Agriculture for Energy and Biobased Products.

#### TITLE IV—PROCUREMENT OF BIOBASED PRODUCTS

- Sec. 401. Federal procurement.
- Sec. 402. Capitol Complex procurement.
- Sec. 403. Education .
- Sec. 404. Regulations.

#### TITLE V—BIOECONOMY GRANTS AND TAX INCENTIVES

- Sec. 501. Small business bioproduct marketing and certification grants.
- Sec. 502. Regional bioeconomy development grants.
- Sec. 503. Preprocessing and harvesting demonstration grants.
- Sec. 504. Sense of the Senate.

#### TITLE VI—OTHER PROVISIONS

- Sec. 601. Education and outreach.
- Sec. 602. Reports.

3 **SEC. 2. FINDINGS.**

4 Congress finds that—

1           (1) the Governors’ Ethanol Coalition, in the re-  
2           port entitled “Ethanol From Biomass America’s  
3           21st Century Transportation Fuel”, found that—

4                   (A) the dependence of the United States  
5           on oil is a major risk to national security and  
6           economic and environmental health;

7                   (B) the safest and least costly approach to  
8           mitigating these risks is to set and achieve ag-  
9           gressive biofuels research, development, produc-  
10          tion and use goals; and

11                  (C) significant investment in cellulosic  
12          biofuels, including a dramatic expansion of ex-  
13          isting research programs, production and con-  
14          sumer incentives, and commercialization assist-  
15          ance, is needed;

16          (2) the National Academy of Sciences has  
17          found that there are abundant sources of waste bio-  
18          mass, and approximately 280,000,000 tons of waste  
19          biomass generated, in all regions of the United  
20          States each year;

21          (3) the Natural Resources Defense Council has  
22          estimated that by 2025, 200,000,000 additional tons  
23          of biomass could be harvested each year from dedi-  
24          cated energy crops grown throughout the country,

1 yielding \$5,000,000,000 annually in profit for farm-  
2 ers;

3 (4) the Department of Agriculture has esti-  
4 mated that energy derived from existing biomass  
5 supplies could displace 25 percent of current petro-  
6 leum imports while still meeting agricultural de-  
7 mands;

8 (5) if all diesel fuel in the United States were  
9 blended with a 4-percent blend of biodiesel, crude oil  
10 consumption in the United States would be reduced  
11 by 300,000,000 barrels each year by 2016;

12 (6) there is sufficient domestic feedstock for the  
13 production of at least 8,000,000,000 annual gallons  
14 of renewable fuels, including ethanol and biodiesel,  
15 by 2012;

16 (7) the Natural Resources Defense Council has  
17 estimated that biomass could supply 50 percent of  
18 current transportation petroleum demand by 2050;

19 (8) the National Academy of Sciences has esti-  
20 mated that enough agricultural crop residue is pro-  
21 duced each year to entirely replace the 700,000,000  
22 barrels of petroleum used in organic chemical pro-  
23 duction in 2004;

24 (9) the Biotechnology Industry Organization, in  
25 its report entitled “New Biotechnology Tools for a

1 Cleaner Environment”, found that if all plastics in  
2 the United States were made from biomass, oil con-  
3 sumption would decrease by up to 145,000,000 bar-  
4 rels per year;

5 (10) the National Academy of Sciences has re-  
6 ported that biobased products have the potential to  
7 improve the sustainability of natural resources, envi-  
8 ronmental quality, and national security while com-  
9 peting economically;

10 (11) the Department of Agriculture has made  
11 significant advances in the understanding and use  
12 by the United States of biomass as a feedstock for  
13 fuels and products;

14 (12) through participation with the Department  
15 of Energy in the Biomass Research and Develop-  
16 ment Initiative, the Department of Agriculture has  
17 also made valuable contributions, through grant-  
18 making and other initiatives, to the support of bio-  
19 mass research and development at institutions  
20 throughout the United States;

21 (13) the Government Accountability Office has  
22 found that—

23 (A) actions to implement the requirements  
24 of the Farm Security and Rural Investment Act  
25 of 2002 (Public Law 107–171; 116 Stat. 134)

1 for purchasing biobased products have been lim-  
2 ited; and

3 (B) greater priority by the Department of  
4 Agriculture would promote compliance by other  
5 agencies with biobased purchasing require-  
6 ments;

7 (14) an Assistant Secretary of the Department  
8 of Agriculture for Energy and Biobased Products  
9 would provide the priority, staff, and financial re-  
10 sources to fully implement biobased purchasing re-  
11 quirements and other provisions of the energy title  
12 of the Farm Security and Rural Investment Act of  
13 2002;

14 (15) Federal Government contractors and the  
15 Architect of the Capitol are currently exempt from  
16 biobased purchasing requirements of the Farm Secu-  
17 rity and Rural Investment Act of 2002;

18 (16) expansion of those biobased purchasing re-  
19 quirements—

20 (A) to Federal contractors would signifi-  
21 cantly expand the market for, and advance  
22 commercialization of, biobased products; and

23 (B) to the Architect of the Capitol would,  
24 in combination with a program of public edu-  
25 cation, allow the Capitol Complex to serve as a

1           showcase for the existence, use, and benefits of  
2           biobased products;

3           (17) fuel derived from cellulosic biomass could  
4           have near-zero net carbon dioxide and sulfur emis-  
5           sions, and substantially reduced carbon monoxide,  
6           particulate and toxic emissions relative to petroleum-  
7           based fuels;

8           (18) the bipartisan National Commission on  
9           Energy Policy has predicted that with a dedicated  
10          Federal research, development, and demonstration  
11          effort, cellulosic ethanol could be less expensive to  
12          produce than gasoline by 2015;

13          (19) the 2004 report of the Rocky Mountain  
14          Institute, entitled “Winning the Oil Endgame”, esti-  
15          mated that a mature biomass industry would create  
16          up to 1,045,000 jobs;

17          (20) the National Academy of Sciences has  
18          found that there are significant opportunities to  
19          produce biomass ethanol more efficiently;

20          (21) the National Commission on Energy Policy  
21          has found that current Federal programs directed  
22          toward reducing the cost of biofuels are under-fund-  
23          ed, intermittent, scattered, and poorly targeted;

24          (22) a report commissioned by the Department  
25          of Defense urged the United States to invest in a

1 new large-scale initiative to produce biofuels as an  
2 alternative supply source, and as a feedstock for fu-  
3 ture fuel vehicles;

4 (23) the Consumer Federation of America has  
5 found that the blending of ethanol into conventional  
6 gasoline can significantly benefit consumers by low-  
7 ering prices at the pump;

8 (24) 45 leading national security, labor, and en-  
9 ergy policy experts joined the Energy Future Coal-  
10 ition in supporting a national commitment to cut the  
11 oil use of the United States by 25 percent by 2025  
12 through the rapid development and deployment of  
13 advanced biomass, alcohol, and other available petro-  
14 leum fuel alternatives; and

15 (25) an aggressive effort to advance technology  
16 for conversion of biomass to fuel and products is  
17 warranted.

18 **SEC. 3. DEFINITIONS.**

19 In this Act:

20 (1) DEPARTMENT.—The term “Department”  
21 means the Department of Agriculture.

22 (2) SECRETARY.—The term “Secretary” means  
23 the Secretary of Agriculture.

1     **TITLE I—BIOMASS RESEARCH**  
2                     **AND DEVELOPMENT**

3     **SEC. 101. DEFINITIONS.**

4             Section 303 of the Biomass Research and Develop-  
5     ment Act of 2000 (Public Law 106–224; 7 U.S.C. 8101  
6     note) is amended—

7             (1) by striking paragraphs (2), (3), and (9);

8             (2) by redesignating paragraphs (4), (5), (6),  
9             (7), and (8) as paragraphs (5), (7), (8), (9), and  
10            (10) respectively;

11            (3) by inserting after paragraph (1) the fol-  
12     lowing:

13            “(2) **BIOBASED FUEL.**—The term ‘biobased  
14     fuel’ means any transportation fuel produced from  
15     biomass.

16            “(3) **BIOBASED PRODUCT.**—The term ‘biobased  
17     product’ means a commercial or industrial product  
18     (including chemicals, materials, polymers, and ani-  
19     mal feed) produced from biomass, or electric power  
20     derived in connection with the conversion of biomass  
21     to fuel.

22            “(4) **BIOMASS.**—

23            “(A) **IN GENERAL.**—The term ‘biomass’  
24     means—

1           “(i) organic material from a plant, in-  
2           cluding grasses and trees, that is planted  
3           for the purpose of being used to produce  
4           energy, including vegetation produced for  
5           harvest on land enrolled in the conserva-  
6           tion reserve program established under  
7           subchapter B of chapter 1 of subtitle D of  
8           title XII of the Food Security Act of 1985  
9           (16 U.S.C. 3831 et seq.) if the harvest is  
10          consistent with the integrity of soil and  
11          water resources and with other environ-  
12          mental purposes of the conservation re-  
13          serve program;

14          “(ii) nonhazardous, lignocellulosic, or  
15          hemicellulosic matter derived from—

16                  “(I) the following forest-related  
17                  resources:

18                          “(aa)           pre-commercial  
19                          thinnings;

20                          “(bb) slash; and

21                          “(cc) brush;

22                  “(II) an agricultural crop, crop  
23                  byproduct, or agricultural crop res-  
24                  idue, including vegetation produced  
25                  for harvest on land enrolled in the

1 conservation reserve program estab-  
2 lished under subchapter B of chapter  
3 1 of subtitle D of title XII of the  
4 Food Security Act of 1985 (16 U.S.C.  
5 3831 et seq.) if the harvest is con-  
6 sistent with the integrity of soil and  
7 water resources and with other envi-  
8 ronmental purposes of the conserva-  
9 tion reserve program; or

10 “(III) miscellaneous waste, in-  
11 cluding landscape or right-of-way tree  
12 trimmings; and

13 “(iii) agricultural animal waste.

14 “(B) EXCLUSION.—The term ‘biomass’  
15 does not include—

16 “(i) unsegregated municipal solid  
17 waste;

18 “(ii) incineration of municipal solid  
19 waste;

20 “(iii) recyclable post-consumer waste  
21 paper and paper products;

22 “(iv) painted, treated, or pressurized  
23 wood;

24 “(v) wood contaminated with plastic  
25 or metals; or

1 “(vi) tires.”; and

2 (4) by inserting after paragraph (5) (as redesignated by paragraph (2)):

3 “(6) DEMONSTRATION.—The term ‘demonstration’ means demonstration of technology in a pilot  
4 plant or semi-works scale facility.”.

7 **SEC. 102. COOPERATION AND COORDINATION IN BIOMASS**  
8 **RESEARCH AND DEVELOPMENT.**

9 Section 304 of the Biomass Research and Development Act of 2000 (Public Law 106–224; 7 U.S.C. 8101  
10 note) is amended—

12 (1) in subsections (a) and (d), by striking “industrial products” each place it appears and inserting “fuels and biobased products”;

15 (2) by striking subsections (b) and (c);

16 (3) by redesignating subsection (d) as subsection (b); and

18 (4) in subsection (b)(1)(A) (as redesignated by paragraph (3)), by striking “an officer of the Department of Agriculture appointed by the President to a position in the Department before the date of the designated, by and with the advice and consent of the Senate” and inserting: “the Assistant Secretary of Agriculture for Energy and Biobased Products”.

1 **SEC. 103. BIOMASS RESEARCH AND DEVELOPMENT BOARD.**

2 Section 305 of the Biomass Research and Develop-  
3 ment Act of 2000 (Public Law 106–224; 7 U.S.C. 8101  
4 note) is amended—

5 (1) in subsections (a) and (c), by striking “in-  
6 dustrial products” each place it appears and insert-  
7 ing “fuels and biobased products”;

8 (2) in subsection (b)—

9 (A) in paragraph (1), by striking  
10 “304(d)(1)(B)” and inserting “304(b)(1)(B)”;  
11 and

12 (B) in paragraph (2), by striking  
13 “304(d)(1)(A)” and inserting “304(b)(1)(A)”;  
14 and

15 (3) in subsection (c)—

16 (A) in paragraph (1)(B), by striking “and”  
17 at the end;

18 (B) in paragraph (2), by striking the pe-  
19 riod at the end and inserting a semicolon; and

20 (C) by adding at the end the following:

21 “(3) ensure that—

22 “(A) solicitations are open and competitive  
23 with awards made annually; and

24 “(B) objectives and evaluation criteria of  
25 the solicitations are clearly stated and mini-

1 mally prescriptive, with no areas of special in-  
 2 terest; and

3 “(4) ensure that the panel of scientific and  
 4 technical peers assembled under section  
 5 307(c)(2)(C) to review proposals is composed pre-  
 6 dominantly of independent experts selected from out-  
 7 side the Departments of Agriculture and Energy.”.

8 **SEC. 104. BIOMASS RESEARCH AND DEVELOPMENT TECH-**  
 9 **NICAL ADVISORY COMMITTEE.**

10 Section 306 of the Biomass Research and Develop-  
 11 ment Act of 2000 (Public Law 106–224; 7 U.S.C. 8101  
 12 note) is amended—

13 (1) in subsection (b)(1)—

14 (A) in subparagraph (A), by striking  
 15 “biobased industrial products” and inserting  
 16 “biofuels”;

17 (B) by redesignating subparagraphs (B)  
 18 through (J) as subparagraphs (C) through (K),  
 19 respectively;

20 (C) by inserting after subparagraph (A)  
 21 the following:

22 “(B) an individual affiliated with the  
 23 biobased industrial and commercial products in-  
 24 dustry.”;

1 (D) in subparagraph (F) (as redesignated  
2 by subparagraph (B)) by striking “an indi-  
3 vidual” and inserting “2 individuals”;

4 (E) in subparagraphs (C), (D), (G), and  
5 (I) (as redesignated by subparagraph (B)) by  
6 striking “industrial products” each place it ap-  
7 pears and inserting “fuels and biobased prod-  
8 ucts”; and

9 (F) in subparagraph (H) (as redesignated  
10 by subparagraph (B)), by inserting “and envi-  
11 ronmental” before “analysis”;

12 (2) in subsection (c)(2)—

13 (A) in subparagraph (A), by striking  
14 “goals” and inserting “objectives, purposes, and  
15 considerations”;

16 (B) by redesignating subparagraphs (B)  
17 and (C) as subparagraphs (C) and (D), respec-  
18 tively;

19 (C) by inserting after subparagraph (A)  
20 the following:

21 “(B) solicitations are open and competitive  
22 with awards made annually and that objectives  
23 and evaluation criteria of the solicitations are  
24 clearly stated and minimally prescriptive, with  
25 no areas of special interest;” and

1 (D) in subparagraph (C) (as redesignated  
2 by subparagraph (B)) by inserting “predomi-  
3 nantly from outside the Departments of Agri-  
4 culture and Energy” after “technical peers”.

5 **SEC. 105. BIOMASS RESEARCH AND DEVELOPMENT INITIA-**  
6 **TIVE.**

7 Section 307 of the Biomass Research and Develop-  
8 ment Act of 2000 (Public Law 106–224; 7 U.S.C. 8101  
9 note) is amended—

10 (1) in subsection (a), by striking “research on  
11 biobased industrial products” and inserting “re-  
12 search on, and development and demonstration of,  
13 biobased fuels and biobased products, and the meth-  
14 ods, practices and technologies, including industrial  
15 biotechnology, for their production”; and

16 (2) by striking subsections (b) through (e) and  
17 inserting the following:

18 “(b) AGENCIES.—

19 “(1) AGRICULTURE.—The Secretary of Agri-  
20 culture, through the point of contact of the Depart-  
21 ment of Agriculture and in consultation with the  
22 Board, shall provide, or enter into, grants, contracts,  
23 and financial assistance under this section through  
24 the Cooperative State Research, Education, and Ex-  
25 tension Service of the Department of Agriculture.

1           “(2) ENERGY.—The Secretary of Energy,  
2           though the point of contact of the Department of  
3           Energy and in consultation with the Board, shall  
4           provide, or enter into, grants, contracts, and finan-  
5           cial assistance under this section through the appro-  
6           priate agency, as determined by the Secretary of En-  
7           ergy.

8           “(c) OBJECTIVES.—The objectives of the Initiative  
9           are to develop—

10           “(1) technologies and processes necessary for  
11           abundant commercial production of biobased fuels at  
12           prices competitive with fossil fuels;

13           “(2) high-value biobased products—

14           “(A) to enhance the economic viability of  
15           biobased fuels and power; and

16           “(B) as substitutes for petroleum-based  
17           feedstocks and products; and

18           “(3) a diversity of sustainable domestic sources  
19           of biomass for conversion to biobased fuels and  
20           biobased products.

21           “(d) PURPOSES.—The purposes of the Initiative  
22           are—

23           “(1) to increase the energy security of the  
24           United States;

1           “(2) to create jobs and enhance the economic  
2           development of the rural economy;

3           “(3) to enhance the environment and public  
4           health; and

5           “(4) to diversify markets for raw agricultural  
6           and forestry products.

7           “(e) TECHNICAL AREAS.—To advance the objectives  
8           and purposes of the Initiative, the Secretary of Agriculture  
9           and the Secretary of Energy, in consultation with the Ad-  
10          ministrators of the Environmental Protection Agency and  
11          heads of other appropriate departments and agencies (re-  
12          ferred to in this section as the ‘Secretaries’), shall direct  
13          research and development toward—

14                 “(1) feedstock production through the develop-  
15                 ment of crops and cropping systems relevant to pro-  
16                 duction of raw materials for conversion to biobased  
17                 fuels and biobased products, including—

18                         “(A) development of advanced and dedi-  
19                         cated crops with desired features, including en-  
20                         hanced productivity, broader site range, low re-  
21                         quirements for chemical inputs, and enhanced  
22                         processing;

23                         “(B) advanced crop production methods to  
24                         achieve the features described in subparagraph  
25                         (A);

1           “(C) feedstock harvest, handling, trans-  
2           port, and storage; and

3           “(D) strategies for integrating feedstock  
4           production into existing managed land;

5           “(2) overcoming recalcitrance of cellulosic bio-  
6           mass through developing technologies for converting  
7           cellulosic biomass into intermediates that can subse-  
8           quently be converted into biobased fuels and  
9           biobased products, including—

10           “(A) pretreatment in combination with en-  
11           zymatic or microbial hydrolysis; and

12           “(B) thermochemical approaches, including  
13           gasification and pyrolysis;

14           “(3) product diversification through tech-  
15           nologies relevant to production of a range of  
16           biobased products (including chemicals, animal  
17           feeds, and cogenerated power) that eventually can  
18           increase the feasibility of fuel production in a bio-  
19           refinery, including—

20           “(A) catalytic processing, including  
21           thermochemical fuel production;

22           “(B) metabolic engineering, enzyme engi-  
23           neering, and fermentation systems for biological  
24           production of desired products or cogeneration  
25           of power;

1                   “(C) product recovery;  
2                   “(D) power production technologies; and  
3                   “(E) integration into existing biomass  
4                   processing facilities, including starch ethanol  
5                   plants, paper mills, and power plants; and  
6                   “(4) analysis that provides strategic guidance  
7                   for the application of biomass technologies in accord-  
8                   ance with realization of societal benefits in improved  
9                   sustainability and environmental quality, cost effec-  
10                  tiveness, security, and rural economic development,  
11                  usually featuring system-wide approaches.

12                  “(f) ADDITIONAL CONSIDERATIONS.—Within the  
13                  technical areas described in subsection (e), and in addition  
14                  to advancing the purposes described in subsection (d) and  
15                  the objectives described in subsection (c), the Secretaries  
16                  shall support research and development—

17                         “(1) to create continuously expanding opportu-  
18                         nities for participants in existing biofuels production  
19                         by seeking synergies and continuity with current  
20                         technologies and practices, including the use of dried  
21                         distillers grains as a bridge feedstock;

22                         “(2) to maximize the environmental, economic,  
23                         and social benefits of production of biobased fuels  
24                         and biobased products on a large scale through life-

1 cycle economic and environmental analysis and other  
2 means; and

3 “(3) to assess the potential of Federal land and  
4 land management programs as feedstock resources  
5 for biobased fuels and biobased products, consistent  
6 with the integrity of soil and water resources and  
7 with other environmental considerations.

8 “(g) ELIGIBLE ENTITIES.—To be eligible for a grant,  
9 contract, or assistance under this section, an applicant  
10 shall be—

11 “(1) an institution of higher education;

12 “(2) a national laboratory;

13 “(3) a Federal research agency;

14 “(4) a State research agency;

15 “(5) a private sector entity;

16 “(6) a nonprofit organization; or

17 “(7) a consortium of 2 or more entities de-  
18 scribed in paragraphs (1) through (6).

19 “(h) ADMINISTRATION.—

20 “(1) IN GENERAL.—After consultation with the  
21 Board, the points of contact shall—

22 “(A) publish annually 1 or more joint re-  
23 quests for proposals for grants, contracts, and  
24 assistance under this section;

1           “(B) establish a priority in grants, con-  
2           tracts, and assistance under this section for re-  
3           search that advances the objectives, purposes,  
4           and additional considerations of this title;

5           “(C) require that grants, contracts, and  
6           assistance under this section be awarded com-  
7           petitively, on the basis of merit, after the estab-  
8           lishment of procedures that provide for sci-  
9           entific peer review by an independent panel of  
10          scientific and technical peers; and

11          “(D) give some preference to applications  
12          that—

13               “(i) involve a consortia of experts  
14               from multiple institutions;

15               “(ii) encourage the integration of dis-  
16               ciplines and application of the best tech-  
17               nical resources; and

18               “(iii) increase the geographic diversity  
19               of demonstration projects.

20          “(2) DISTRIBUTION OF FUNDING BY TECH-  
21          NICAL AREA.—Of the funds authorized to be appro-  
22          priated for activities described in this section—

23               “(A) 20 percent shall be used to carry out  
24               activities for feedstock production under sub-  
25               section (e)(1);

1           “(B) 45 percent shall be used to carry out  
2 activities for overcoming recalcitrance of cel-  
3 lulosic biomass under subsection (e)(2);

4           “(C) 30 percent shall be used to carry out  
5 activities for product diversification under sub-  
6 section (e)(3); and

7           “(D) 5 percent shall be used to carry out  
8 activities for strategic guidance under sub-  
9 section (e)(4).

10           “(3) DISTRIBUTION OF FUNDING WITHIN EACH  
11 TECHNICAL AREA.—Within each technical area de-  
12 scribed in paragraphs (1) through (3) of subsection  
13 (e)—

14           “(A) 15 percent of funds shall be used for  
15 applied fundamentals;

16           “(B) 35 percent of funds shall be used for  
17 innovation; and

18           “(C) 50 percent of funds shall be used for  
19 demonstration.

20           “(4) MATCHING FUNDS.—

21           “(A) IN GENERAL.—A minimum 20 per-  
22 cent funding match shall be required for dem-  
23 onstration projects under this title.

1           “(B) NO OTHER REQUIREMENT.—No  
2 matching funds shall be required for other ac-  
3 tivities under this title.

4           “(5) TECHNOLOGY AND INFORMATION TRANS-  
5 FER TO AGRICULTURAL USERS.—

6           “(A) IN GENERAL.—The Administrator of  
7 the Cooperative State Research, Education, and  
8 Extension Service and the Chief of the Natural  
9 Resources Conservation Service shall ensure  
10 that applicable research results and tech-  
11 nologies from the Initiative are adapted, made  
12 available, and disseminated through those serv-  
13 ices, as appropriate.

14           “(B) REPORT.—Not later than 2 years  
15 after the date of enactment of this paragraph,  
16 and every 2 years thereafter, the Administrator  
17 of the Cooperative State Research, Education,  
18 and Extension Service and the Chief of the  
19 Natural Resources Conservation Service shall  
20 submit to the committees of Congress with ju-  
21 risdiction over the Initiative a report describing  
22 the activities conducted by the services under  
23 this subsection.”.

1 **SEC. 106. REPORTS.**

2 Section 309 of the Biomass Research and Develop-  
3 ment Act of 2000 (Public Law 106–224; 7 U.S.C. 8101  
4 note) is amended—

5 (1) in subsection (a)—

6 (A) in paragraph (2), by striking “indus-  
7 trial product” and inserting “fuels and biobased  
8 products”; and

9 (B) in paragraph (3), by striking “indus-  
10 trial products” each place it appears and insert-  
11 ing “fuels and biobased products”;

12 (2) by redesignating subsection (b) as sub-  
13 section (c);

14 (3) by inserting after subsection (a) the fol-  
15 lowing:

16 “(b) ASSESSMENT REPORT AND STRATEGIC PLAN.—  
17 Not later than 1 year after the date of enactment of the  
18 National Security and Bioenergy Investment Act of 2005,  
19 the Secretary and the Secretary of Energy shall jointly  
20 submit to Congress a report that—

21 “(1) describes the status and progress of cur-  
22 rent research and development efforts in both the  
23 Federal Government and private sector in achieving  
24 the objectives, purposes, and considerations of this  
25 title, specifically addressing each of the technical  
26 areas identified in section 307(e);

1           “(2) describes the actions taken to implement  
2 the improvements directed by this title; and

3           “(3) outlines a strategic plan for achieving the  
4 objectives, purposes, and considerations of this  
5 title.”; and

6           (4) in subsection (c) (as redesignated by para-  
7 graph (2))—

8           (A) in paragraph (1)—

9           (i) in subparagraph (A), by striking  
10 “purposes described in section 307(b)” and  
11 inserting “objectives, purposes, and addi-  
12 tional considerations described in sub-  
13 sections (c) through (f) of section 307”;

14           (ii) in subparagraph (B), by striking  
15 “and” at the end;

16           (iii) by redesignating subparagraph  
17 (C) as subparagraph (D); and

18           (iv) by inserting after subparagraph  
19 (B) the following:

20           “(C) achieves the distribution of funds de-  
21 scribed in paragraphs (2) and (3) of section  
22 307(h); and”; and

23           (B) in paragraph (2), by striking “indus-  
24 trial products” and inserting “fuels and  
25 biobased products”.

1 **SEC. 107. FUNDING.**

2 (a) FUNDING.—Section 310(a)(2) of the Biomass Re-  
3 search and Development Act of 2000 (Public Law 106-  
4 224; 7 U.S.C. 8101 note) is amended by striking  
5 “\$14,000,000 for each of fiscal years 2003 through 2007”  
6 and inserting “\$200,000,000 for each of fiscal years 2006  
7 through 2010”.

8 (b) AUTHORIZATION OF APPROPRIATIONS.—Section  
9 310(b) of the Biomass Research and Development Act of  
10 2000 (Public Law 106-224; 7 U.S.C. 8101 note) is  
11 amended by striking “title \$54,000,000 for each of fiscal  
12 years 2002 through 2007” and inserting “title  
13 \$200,000,000 for fiscal year 2011 and each fiscal year  
14 thereafter”.

15 **SEC. 108. TERMINATION OF AUTHORITY.**

16 The Biomass Research and Development Act of 2000  
17 (Public Law 106-224; 7 U.S.C. 8101 note) is amended  
18 by striking section 311.

19 **SEC. 109. BIOMASS-DERIVED HYDROGEN.**

20 (a) IN GENERAL.—The Secretary shall conduct a re-  
21 search, development, and demonstration program focused  
22 on the economic production and use of hydrogen from  
23 biofuels, with emphasis on the rural transportation and  
24 rural electrical generation sectors.

1 (b) TRANSPORTATION SECTOR OBJECTIVES.—The  
2 objectives of the program in the transportation sector shall  
3 be to—

4 (1) conduct research, and to develop and test  
5 processes and equipment, to produce low-cost liquid  
6 biobased fuels that can be transported to distant  
7 fueling stations for the production of hydrogen or  
8 for direct use in conventional internal combustion  
9 engine vehicles;

10 (2) demonstrate the cost-effective production of  
11 hydrogen from liquid biobased fuels at the local fuel-  
12 ing station, to eliminate the costs of transporting hy-  
13 drogen long distances or building hydrogen pipeline  
14 networks;

15 (3) demonstrate the use of hydrogen derived  
16 from liquid biobased fuels in fuel cell vehicles, or, as  
17 an interim cost-reduction option, in internal combus-  
18 tion engine hybrid electric vehicles, to demonstrate  
19 sustainable transportation with significantly reduced  
20 local air pollution, greenhouse gas emissions, and de-  
21 pendence on imported fossil fuels;

22 (4) evaluate the economic return to agricultural  
23 producers producing feedstocks for liquid biobased  
24 fuels compared to agricultural producer returns as  
25 of the date of enactment of this Act;

1           (5) evaluate the crop yield and long-term soil  
2           sustainability of growing and harvesting feedstocks  
3           for liquid biobased fuels; and

4           (6) evaluate the fuel costs to fuel cell car own-  
5           ers (or hybrid electric car owners running on hydro-  
6           gen) per mile driven compared to burning gasoline  
7           in conventional vehicles.

8           (c) ELECTRICAL GENERATION SECTOR OBJEC-  
9           TIVES.—The objectives of the program in the rural elec-  
10          trical generation sector shall be to—

11           (1) design, develop, and test low-cost gasifi-  
12          cation equipment to convert biomass to hydrogen at  
13          regional rural cooperatives, or at businesses owned  
14          by farmers, close to agricultural operations to mini-  
15          mize the cost of biomass transportation to large cen-  
16          tral gasification plants;

17           (2) demonstrate low-cost electrical generation at  
18          such rural cooperatives or farmer-owned businesses,  
19          using renewable hydrogen derived from biomass in  
20          either fuel cell generators, or, as an interim cost re-  
21          duction option, in conventional internal combustion  
22          engine gensets;

23           (3) determine the economic return to coopera-  
24          tives or other businesses owned by farmers of pro-  
25          ducing hydrogen from biomass and selling electricity

1 compared to agricultural economic returns from pro-  
2 ducing and selling conventional crops alone;

3 (4) evaluate the crop yield and long-term soil  
4 sustainability of growing and harvesting of feed-  
5 stocks for biomass gasification, and

6 (5) demonstrate the use of a portion of the bio-  
7 mass-derived hydrogen in various agricultural vehi-  
8 cles to reduce—

9 (A) dependence on imported fossil fuel;

10 and

11 (B) environmental impacts.

12 (d) AUTHORIZATION FOR APPROPRIATIONS.—There  
13 is authorized to be appropriated to carry out this section  
14 \$5,000,000 for each of fiscal years 2006 through 2010.

## 15 **TITLE II—PRODUCTION** 16 **INCENTIVES**

### 17 **SEC. 201. PRODUCTION INCENTIVES.**

18 (a) PURPOSE.—The purpose of this section is to—

19 (1) accelerate deployment and commercializa-  
20 tion of biofuels;

21 (2) deliver the first 1,000,000,000 gallons of  
22 cellulosic biofuels by 2015;

23 (3) ensure biofuels produced after 2015 are  
24 cost competitive with gasoline and diesel; and

1           (4) ensure that small feedstock producers and  
2 rural small businesses are full participants in the de-  
3 velopment of the cellulosic biofuels industry.

4           (b) DEFINITIONS.—In this section:

5           (1) CELLULOSIC BIOFUELS.—The term “cel-  
6 lulosic biofuels” means any fuel that is produced  
7 from cellulosic feedstocks.

8           (2) ELIGIBLE ENTITY.—The term “eligible enti-  
9 ty” means a producer of fuel from cellulosic biofuels  
10 the production facility of which—

11                   (A) is located in the United States;

12                   (B) meets all applicable Federal and State  
13 permitting requirements;

14                   (C) is to begin production of cellulosic  
15 biofuels not later than 3 years after the date of  
16 the reverse auction in which the producer par-  
17 ticipates; and

18                   (D) meets any financial criteria established  
19 by the Secretary.

20           (c) PROGRAM.—

21           (1) ESTABLISHMENT.—The Secretary, in con-  
22 sultation with the Secretary of Energy, the Sec-  
23 retary of Defense, and the Administrator of the En-  
24 vironmental Protection Agency, shall establish an in-

1 centive program for the production of cellulosic  
2 biofuels.

3 (2) BASIS OF INCENTIVES.—Under the pro-  
4 gram, the Secretary shall award production incen-  
5 tives on a per gallon basis of cellulosic biofuels from  
6 eligible entities, through—

7 (A) set payments per gallon of cellulosic  
8 biofuels produced in an amount determined by  
9 the Secretary, until initiation of the first re-  
10 verse auction; and

11 (B) reverse auction thereafter.

12 (3) FIRST REVERSE AUCTION.—The first re-  
13 verse auction shall be held on the earlier of—

14 (A) not later than 1 year after the first  
15 year of annual production in the United States  
16 of 100,000,000 gallons of cellulosic biofuels, as  
17 determined by the Secretary; or

18 (B) not later than 3 years after the date  
19 of enactment of this Act.

20 (4) REVERSE AUCTION PROCEDURE.—

21 (A) IN GENERAL.—On initiation of the  
22 first reverse auction, and each year thereafter  
23 until the earlier of the first year of annual pro-  
24 duction in the United States of 1,000,000,000  
25 gallons of cellulosic biofuels, as determined by

1 the Secretary, or 10 years after the date of en-  
2 actment of this Act, the Secretary shall conduct  
3 a reverse auction at which—

4 (i) the Secretary shall solicit bids  
5 from eligible entities;

6 (ii) eligible entities shall submit—

7 (I) a desired level of production  
8 incentive on a per gallon basis; and

9 (II) an estimated annual produc-  
10 tion amount in gallons; and

11 (iii) the Secretary shall issue awards  
12 for the production amount submitted, be-  
13 ginning with the eligible entity submitting  
14 the bid for the lowest level of production  
15 incentive on a per gallon basis, until the  
16 amount of funds available for the reverse  
17 auction is committed.

18 (B) AMOUNT OF INCENTIVE RECEIVED.—

19 An eligible entity selected by the Secretary  
20 through a reverse auction shall receive the  
21 amount of performance incentive requested in  
22 the auction for each gallon produced and sold  
23 by the entity during the first 6 years of oper-  
24 ation.

1 (d) LIMITATIONS.—Awards under this section shall  
2 be limited to—

3 (1) a per gallon amount determined by the Sec-  
4 retary during the first 4 years of the program;

5 (2) a declining per gallon cap over the remain-  
6 ing lifetime of the program, to be established by the  
7 Secretary so that cellulosic biofuels produced after  
8 the first year of annual cellulosic biofuels production  
9 in the United States in excess of 1,000,000,000 gal-  
10 lons are cost competitive with gasoline and diesel;

11 (3) not more than 25 percent of the funds com-  
12 mitted within each reverse auction to any 1 project;

13 (4) not more than \$100,000,000 in any 1 year;  
14 and

15 (5) not more than \$1,000,000,000 over the life-  
16 time of the program.

17 (e) PRIORITY.—In selecting a project under the pro-  
18 gram, the Secretary shall give priority to projects that—

19 (1) demonstrate outstanding potential for local  
20 and regional economic development;

21 (2) include agricultural producers or coopera-  
22 tives of agricultural producers as equity partners in  
23 the ventures; and

24 (3) have a strategic agreement in place to fairly  
25 reward feedstock suppliers.

1 (f) FUNDING.—

2 (1) IN GENERAL.—The Secretary shall use to  
3 carry out this title \$250,000,000 of funds of the  
4 Commodity Credit Corporation, to remain available  
5 until expended.

6 (2) AUTHORIZATIONS OF APPROPRIATIONS.—In  
7 addition to amounts made available under paragraph  
8 (1), there are authorized to be appropriated such  
9 sums as are necessary to carry out this section.

10 **TITLE III—ASSISTANT SEC-**  
11 **RETARY OF AGRICULTURE**  
12 **FOR ENERGY AND BIOBASED**  
13 **PRODUCTS**

14 **SEC. 301. ASSISTANT SECRETARY OF AGRICULTURE FOR**  
15 **ENERGY AND BIOBASED PRODUCTS.**

16 (a) ESTABLISHMENT.—Not later than 1 year after  
17 the date of enactment of this Act, the Secretary shall es-  
18 tablish in the Department a position of Assistant Sec-  
19 retary of Agriculture for Energy and Biobased Products  
20 (referred to in this section as the “Assistant Secretary”).

21 (b) RESPONSIBILITIES.—The Assistant Secretary  
22 shall be responsible for—

23 (1) the energy programs established under title  
24 IX of the Farm Security and Rural Investment Act  
25 of 2002 (7 U.S.C. 8101 et seq.); and

1           (2) all other programs and initiatives that the  
2       Secretary considers appropriate.

3       (c) CONFIRMATION REQUIREMENT.—The Assistant  
4       Secretary shall be appointed by the President, by and with  
5       the advice and consent of the Senate.

6       (d) PERSONNEL.—The Secretary, acting through the  
7       Assistant Secretary, may transfer or assign work to per-  
8       sonnel, or assign staff hours, on a permanent or a part-  
9       time basis, as needed, to the Office of the Assistant Sec-  
10      retary to carry out the functions and duties of the office.

11      (e) BUDGET.—The Secretary shall establish a budget  
12      for the office of the Assistant Secretary.

13           **TITLE IV—PROCUREMENT OF**  
14           **BIOBASED PRODUCTS**

15      **SEC. 401. FEDERAL PROCUREMENT.**

16      (a) DEFINITION OF PROCURING AGENCY.—Section  
17      9001 of the Farm Security and Rural Investment Act of  
18      2002 (7 U.S.C. 8101) is amended—

19           (1) by redesignating paragraphs (4), (5), and  
20           (6) as paragraphs (5), (6), and (7), respectively; and

21           (2) by inserting after paragraph (3) the fol-  
22      lowing:

23           “(4) PROCURING AGENCY.—The term ‘pro-  
24      curing agency’ means—

1           “(A) any Federal agency that is using  
2           Federal funds for procurement; or

3           “(B) any person contracting with any Fed-  
4           eral agency with respect to work performed  
5           under the contract.”.

6           (b) PROCUREMENT.—Section 9002 of the Farm Se-  
7           curity and Rural Investment Act of 2002 (7 U.S.C. 8102)  
8           is amended—

9           (1) by striking “Federal agency” each place it  
10          appears (other than in subsections (f) and (g)) and  
11          inserting “procuring agency”;

12          (2) in subsection (c)(2)—

13                (A) by striking “(2)” and all that follows  
14                through “Notwithstanding” and inserting the  
15                following:

16                “(2) FLEXIBILITY.—Notwithstanding”;

17                (B) by striking “an agency” and inserting  
18                “a procuring agency”; and

19                (C) by striking “the agency” and inserting  
20                “the procuring agency”;

21          (3) in subsection (d), by striking “procured by  
22          Federal agencies” and inserting “procured by pro-  
23          curing agencies”; and

24          (4) in subsection (f), by striking “Federal agen-  
25          cies” and inserting “procuring agencies” .

1 **SEC. 402. CAPITOL COMPLEX PROCUREMENT.**

2 Section 9002 of the Farm Security and Rural Invest-  
3 ment Act of 2002 (7 U.S.C. 8102) (as amended by section  
4 401(b)) is amended—

5 (1) by redesignating subsection (j) as sub-  
6 section (k); and

7 (2) by inserting after subsection (i) the fol-  
8 lowing:

9 “(j) INCLUSION.—Not later than 90 days after the  
10 date of enactment of the National Security and Bioenergy  
11 Investment Act of 2005, the Architect of the Capitol, the  
12 Sergeant of Arms of the Senate, and the Chief Adminis-  
13 trative Officer of the House of Representatives shall issue  
14 regulations that apply the requirements of this section to  
15 procurement for the Capitol Complex.”.

16 **SEC. 403. EDUCATION .**

17 (a) IN GENERAL.—The Architect of the Capitol shall  
18 establish in the Capitol Complex a program of public edu-  
19 cation regarding use by the Architect of the Capitol of  
20 biobased products.

21 (b) PURPOSES.—The purposes of the program shall  
22 be—

23 (1) to establish the Capitol Complex as a show-  
24 case for the existence and benefits of biobased prod-  
25 ucts; and

1           (2) to provide access to further information on  
2           biobased products to occupants and visitors.

3 **SEC. 404. REGULATIONS.**

4           Requirements issued under the amendment made by  
5           section 402 shall be made in accordance with regulations  
6           issued by the Committee on Rules and Administration of  
7           the Senate and the Committee on House Administration  
8           of the House of Representatives.

9           **TITLE V—BIOECONOMY GRANTS**  
10           **AND TAX INCENTIVES**

11 **SEC. 501. SMALL BUSINESS BIOPRODUCT MARKETING AND**  
12           **CERTIFICATION GRANTS.**

13           (a) **IN GENERAL.**—Using amounts made available  
14           under subsection (g), the Secretary shall make available  
15           on a competitive basis grants to eligible entities described  
16           in subsection (b) for the biobased product marketing and  
17           certification purposes described in subsection (c).

18           (b) **ELIGIBLE ENTITIES.**—An entity eligible for a  
19           grant under this section is any manufacturer of biobased  
20           products that—

21                   (1) has fewer than 50 employees;

22                   (2) proposes to use the grant for the biobased  
23           product marketing and certification purposes de-  
24           scribed in subsection (c); and

1           (3) has not previously received a grant under  
2 this section.

3           (c) BIOBASED PRODUCT MARKETING AND CERTIFI-  
4 CATION GRANT PURPOSES.—A grant made under this sec-  
5 tion shall be used—

6           (1) to plan activities and working capital for  
7 marketing of biobased products; and

8           (2) to provide private sector cost sharing for  
9 the certification of biobased products.

10          (d) MATCHING FUNDS.—

11           (1) IN GENERAL.—Grant recipients shall pro-  
12 vide matching non-Federal funds equal to the  
13 amount of the grant received.

14           (2) EXPENDITURE.—Matching funds shall be  
15 expended in advance of grant funding, so that for  
16 every dollar of grant that is advanced, an equal  
17 amount of matching funds shall have been funded  
18 prior to submitting the request for reimbursement.

19           (e) AMOUNT.—A grant made under this section shall  
20 not exceed \$100,000.

21           (f) ADMINISTRATION.—The Secretary shall establish  
22 such administrative requirements for grants under this  
23 section, including requirements for applications for the  
24 grants, as the Secretary considers appropriate.

1 (g) AUTHORIZATIONS OF APPROPRIATIONS.—There  
2 are authorized to be appropriated to make grants under  
3 this section—

4 (1) \$1,000,000 for fiscal year 2006; and

5 (2) such sums as are necessary for fiscal year  
6 2007 and each subsequent fiscal year.

7 **SEC. 502. REGIONAL BIOECONOMY DEVELOPMENT GRANTS.**

8 (a) IN GENERAL.—Using amounts made available  
9 under subsection (g), the Secretary shall make available  
10 on a competitive basis grants to eligible entities described  
11 in subsection (b) for the purposes described in subsection  
12 (c).

13 (b) ELIGIBLE ENTITIES.—An entity eligible for a  
14 grant under this section is any regional bioeconomy devel-  
15 opment association, agricultural or energy trade associa-  
16 tion, or Land Grant institution that—

17 (1) proposes to use the grant for the purposes  
18 described in subsection (c); and

19 (2) has not previously received a grant under  
20 this section.

21 (c) REGIONAL BIOECONOMY DEVELOPMENT ASSO-  
22 CIATION GRANT PURPOSES.—A grant made under this  
23 section shall be used to support and promote the growth  
24 and development of the bioeconomy within the region  
25 served by the eligible entity, through coordination, edu-

1 cation, outreach, and other endeavors by the eligible enti-  
2 ty.

3 (d) MATCHING FUNDS.—

4 (1) IN GENERAL.—Grant recipients shall pro-  
5 vide matching non-Federal funds equal to the  
6 amount of the grant received.

7 (2) EXPENDITURE.—Matching funds shall be  
8 expended in advance of grant funding, so that for  
9 every dollar of grant that is advanced, an equal  
10 amount of matching funds shall have been funded  
11 prior to submitting the request for reimbursement.

12 (e) ADMINISTRATION.—The Secretary shall establish  
13 such administrative requirements for grants under this  
14 section, including requirements for applications for the  
15 grants, as the Secretary considers appropriate.

16 (f) AMOUNT.—A grant made under this section shall  
17 not exceed \$500,000.

18 (g) AUTHORIZATIONS OF APPROPRIATIONS.—There  
19 are authorized to be appropriated to make grants under  
20 this section—

21 (1) \$1,000,000 for fiscal year 2006; and

22 (2) such sums as are necessary for fiscal year  
23 2007 and each subsequent fiscal year.

1 **SEC. 503. PREPROCESSING AND HARVESTING DEMONSTRATION GRANTS.**  
2

3 (a) IN GENERAL.—The Secretary shall make grants  
4 available on a competitive basis to enterprises owned by  
5 agricultural producers, for the purposes of demonstrating  
6 cost-effective, cellulosic biomass innovations in—

7 (1) preprocessing of feedstocks, including clean-  
8 ing, separating and sorting, mixing or blending, and  
9 chemical or biochemical treatments, to add value  
10 and lower the cost of feedstock processing at a bio-  
11 refinery; or

12 (2) 1-pass or other efficient, multiple crop har-  
13 vesting techniques.

14 (b) LIMITATIONS ON GRANTS.—

15 (1) NUMBER OF GRANTS.—Not more than 5  
16 demonstration projects per fiscal year shall be fund-  
17 ed under this section.

18 (2) NON-FEDERAL COST SHARE.—The non-  
19 Federal cost share of a project under this section  
20 shall be not less than 20 percent, as determined by  
21 the Secretary.

22 (c) CONDITION OF GRANT.—To be eligible for a  
23 grant for a project under this section, a recipient of a  
24 grant or a participating entity shall agree to use the mate-  
25 rial harvested under the project—

26 (1) to produce ethanol; or

1           (2) for another energy purpose, such as the  
2           generation of heat or electricity.

3           (d) AUTHORIZATION FOR APPROPRIATIONS.—There  
4 is authorized to be appropriated to carry out this section  
5 \$5,000,000 for each of fiscal years 2006 through 2010.

6 **SEC. 504. SENSE OF THE SENATE.**

7           It is the sense of the Senate that Congress should  
8 amend the Federal tax code to encourage investment in,  
9 and production and use of, biobased fuels and biobased  
10 products through—

11           (1) an investment tax credit for the construc-  
12           tion or modification of facilities for the production of  
13           fuels from cellulose biomass, to drive private capital  
14           towards new biorefinery projects in a manner that  
15           allows participation by smaller farms and coopera-  
16           tives; and

17           (2) an investment tax credit to small manufac-  
18           turers of biobased products to lower the capital costs  
19           of starting and maintaining a biobased business.

20 **TITLE VI—OTHER PROVISIONS**

21 **SEC. 601. EDUCATION AND OUTREACH.**

22           (a) IN GENERAL.—The Secretary shall establish,  
23 within the Department or through an independent con-  
24 tracting entity, a program of education and outreach on  
25 biobased fuels and biobased products consisting of—

1           (1) training and technical assistance programs  
2           for feedstock producers to promote producer owner-  
3           ship, investment, and participation in the operation  
4           of processing facilities; and

5           (2) public education and outreach to familiarize  
6           consumers with the biobased fuels and biobased  
7           products.

8           (b) AUTHORIZATION OF APPROPRIATIONS.—There is  
9           authorized to be appropriated to carry out this title  
10          \$1,000,000 for each of fiscal years 2006 through 2010.

11          **SEC. 602. REPORTS.**

12          (a) PROGRESS REPORT.—Not later than 1 year after  
13          the date of enactment of this Act, the Secretary shall sub-  
14          mit to the Committee on Agriculture of the House of Rep-  
15          resentatives and the Committee on Agriculture, Nutrition,  
16          and Forestry of the Senate a report on progress in estab-  
17          lishing the Office of the Assistant Secretary of Agriculture  
18          for Energy and Biobased Products under title I.

19          (b) BIOBASED PRODUCT POTENTIAL.—Not later  
20          than 1 year after the date of enactment of this Act, the  
21          Secretary shall submit to the Committee on Agriculture  
22          of the House of Representatives and the Committee on  
23          Agriculture, Nutrition, and Forestry of the Senate a re-  
24          port that—

1           (1) describes the economic potential for the  
2           United States of the widespread production and use  
3           of commercial and industrial biobased products  
4           through calendar year 2025; and

5           (2) as the maximum extent practicable, identi-  
6           fies the economic potential by product area.

7           (c) ANALYSIS OF ECONOMIC INDICATORS.—Not later  
8           than 2 years after the date of enactment of this Act, and  
9           every 2 years thereafter, the Secretary shall submit to  
10          Congress an analysis of economic indicators of the  
11          biobased economy during the 2-year period preceding the  
12          analysis.

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