

106TH CONGRESS
1ST SESSION

H. R. 2819

To create an initiative for research and development into the utilization
of biomass for fuel and industrial products.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 8, 1999

Mr. UDALL of Colorado (for himself, Mr. BOEHLERT, and Mr. MINGE) introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Agriculture, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To create an initiative for research and development into
the utilization of biomass for fuel and industrial products.

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 “Biomass Research and
5 Development Act of 1999”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

8 (1) several prominent studies, including studies
9 by the President’s Council of Advisors on Science

1 and Technology and the National Research Council,
2 support the potential for large research-driven ad-
3 vances in technologies for production of biobased
4 products;

5 (2) if an appropriate research and development
6 effort is undertaken, conversion of biomass into
7 biobased products can lead to enhanced national se-
8 curity, healthier rural economies, improved environ-
9 mental quality, near-zero net greenhouse gas emis-
10 sions, technology export, and sustainable resource
11 supply;

12 (3) additional research and development can
13 help determine whether biomass feedstocks suitable
14 for industrial processing show potential for sustain-
15 able production, improved soil fertility, and carbon
16 sequestration;

17 (4) basic research to understand important
18 mechanisms of biomass conversion processes can be
19 expected to accelerate the application and advance-
20 ment of biomass processing technology by—

21 (A) increasing the confidence and speed
22 with which new technologies can be scaled up;
23 and

24 (B) giving rise to processing innovations
25 based on new knowledge; and

1 (5) it is appropriate for the Federal Govern-
2 ment to provide precommercial investment in basic
3 and applied research in the biomass processing area.

4 **SEC. 3. DEFINITIONS.**

5 For purposes of this Act—

6 (1) the term “Advisory Committee” means the
7 Biomass Research and Development Technical Advi-
8 sory Committee established under section 6;

9 (2) the term “biobased product” means any
10 fuel or chemical product derived from biomass;

11 (3) the term “bioenergy” means biomass used
12 in the production of energy (including electricity, liq-
13 uid, solid, and gaseous fuels, and heat);

14 (4) the term “biomass” means—

15 (A) any organic material from a plant
16 which is planted exclusively for purpose of being
17 used to produce a biobased product; or

18 (B) any solid, nonhazardous, cellulosic
19 waste material which is segregated from other
20 waste materials and which is derived from—

21 (i) any of the following forest-related
22 resources: mill residues, precommercial
23 thinnings, slash, and brush, but not includ-
24 ing old-growth timber;

25 (ii) animal waste;

1 (iii) urban sources, including waste
2 pallets, crates, and dunnage, manufac-
3 turing and construction wood wastes, and
4 landscape or right-of-way tree trimmings,
5 but not including unsegregated municipal
6 solid waste (garbage) or paper that is com-
7 monly recycled; or

8 (iv) agriculture sources, including or-
9 chard tree crops, vineyard, grain, legumes,
10 sugar, and other crop byproducts or resi-
11 dues;

12 (5) the term “Board” means the Biomass Re-
13 search and Development Board established under
14 section 5;

15 (6) the term “Initiative” means the Biomass
16 Research and Development Initiative established
17 under section 7;

18 (7) the term “institution of higher education”
19 has the meaning given that term in section 1201(a)
20 of the Higher Education Act of 1965 (20 U.S.C.
21 1141(a));

22 (8) the term “national laboratory” has the
23 meaning given the term “laboratory” in section
24 12(d)(2) of the Stevenson-Wydler Technology Inno-
25 vation Act of 1980 (15 U.S.C. 3710a(d)(2)); and

1 (9) the term “point of contact” means a point
2 of contact designated under section 4(c).

3 **SEC. 4. COOPERATION AND COORDINATION IN BIOMASS**
4 **RESEARCH AND DEVELOPMENT.**

5 (a) **IN GENERAL.**—The Secretary of Energy and the
6 Secretary of Agriculture shall coordinate policies and pro-
7 cedures that promote research, development, and dem-
8 onstration on the production of biobased products.

9 (b) **AREAS.**—In carrying out this Act, the Secretary
10 of Energy and the Secretary of Agriculture shall promote
11 research, development, and demonstration to—

12 (1) ensure full consideration of potential feed-
13 stock resources for energy-efficient, economically
14 competitive, and environmentally sound biobased
15 products; and

16 (2) assess the environmental, economic, and so-
17 cial impact of production of biobased products from
18 biomass on a large scale.

19 (c) **POINTS OF CONTACT.**—

20 (1) **IN GENERAL.**—To coordinate research, de-
21 velopment, and demonstration programs and activi-
22 ties relating to biobased products that are carried
23 out by their respective Departments—

24 (A) the Secretary of Energy shall des-
25 ignate, as the point of contact for the Depart-

1 ment of Energy, a high-level officer of the De-
2 partment of Energy; and

3 (B) the Secretary of Agriculture shall des-
4 ignate, as the point of contact for the Depart-
5 ment of Agriculture, a high-level officer of the
6 Department of Agriculture.

7 (2) DUTIES.—The points of contact shall
8 jointly—

9 (A) assist in arranging interlaboratory,
10 interagency, and site-specific supplemental
11 agreements for research, development, and
12 demonstration projects relating to biobased
13 products;

14 (B) administer the Initiative; and

15 (C) respond in writing to each rec-
16 ommendation of the Advisory Committee made
17 under section 6.

18 **SEC. 5. BIOMASS RESEARCH AND DEVELOPMENT BOARD.**

19 (a) ESTABLISHMENT.—The Secretary of Energy and
20 the Secretary of Agriculture shall jointly establish the Bio-
21 mass Research and Development Board to coordinate pro-
22 grams within and among departments and agencies of the
23 Federal Government for the purpose of promoting the use
24 of biobased products by—

1 (1) maximizing the benefits deriving from Fed-
2 eral grants, research and development agreements,
3 and other assistance; and

4 (2) bringing coherence to Federal planning.

5 (b) MEMBERSHIP.—The Board shall consist of—

6 (1) the point of contact of the Department of
7 Energy designated under section 4(c), who shall
8 serve as chairperson of the Board;

9 (2) the point of contact of the Department of
10 Agriculture designated under section 4(c), who shall
11 serve as vice-chairperson of the Board;

12 (3) a senior officer, appointed by the head of
13 the agency, who has a rank that is equivalent to the
14 points of contact, of—

15 (A) the Office of Science and Technology
16 Policy;

17 (B) the National Science Foundation;

18 (C) the Environmental Protection Agency;

19 and

20 (D) the Department of the Interior; and

21 (4) at the option of the Secretary of Energy
22 and the Secretary of Agriculture, other members ap-
23 pointed jointly by those Secretaries (after consulta-
24 tion with members described in paragraphs (1)
25 through (3)).

1 (c) DUTIES.—The Board shall—

2 (1) coordinate research, development, and dem-
3 onstration activities relating to biobased products—

4 (A) between the Department of Energy
5 and the Department of Agriculture; and

6 (B) with other departments and agencies
7 of the Federal Government; and

8 (2) provide recommendations to the points of
9 contact concerning administration of this Act.

10 (d) MEETINGS.—The Board shall meet at least quar-
11 terly.

12 **SEC. 6. BIOMASS RESEARCH AND DEVELOPMENT TECH-**
13 **NICAL ADVISORY COMMITTEE.**

14 (a) ESTABLISHMENT.—The Secretary of Energy and
15 the Secretary of Agriculture shall jointly establish the Bio-
16 mass Research and Development Technical Advisory Com-
17 mittee to—

18 (1) advise the Secretary of Energy and the Sec-
19 retary of Agriculture concerning—

20 (A) the technical focus and direction of re-
21 quests for proposals issued under the Initiative;

22 and

23 (B) procedures for reviewing the proposals;

24 (2) facilitate consultations and partnerships
25 among Federal agencies, the research community,

1 agricultural and forestry producers, industry, con-
2 sumers, and other interested groups to carry out
3 program activities relating to the Initiative; and

4 (3) evaluate and perform strategic planning on
5 program activities relating to the Initiative.

6 (b) MEMBERSHIP.—The Secretary of Energy and the
7 Secretary of Agriculture shall jointly appoint to the Advi-
8 sory Committee no more than 15 members, and shall in-
9 clude the following representation:

10 (1) Individuals with scientific and engineering
11 expertise in biobased products.

12 (2) Individuals affiliated with environmental or
13 conservation organizations.

14 (3) Individuals affiliated with commodity trade
15 associations.

16 (4) Individuals affiliated with the biobased
17 products industry.

18 (5) Individuals with expertise in energy anal-
19 ysis.

20 (6) Individuals with expertise in the economics
21 of biobased products.

22 (7) Individuals with expertise in agricultural ec-
23 onomics.

24 (8) Individuals with expertise relevant to the
25 commercialization of industrial products.

1 (c) DUTIES.—The Advisory Committee shall—

2 (1) advise the points of contact with respect to
3 the Initiative; and

4 (2) evaluate whether, and make recommenda-
5 tions in writing to the Board to ensure that—

6 (A) funds appropriated for the Initiative
7 are distributed and used in a manner that is
8 consistent with the purposes described in sec-
9 tion 7(b);

10 (B) the points of contact are funding pro-
11 posals under this Act that are selected on a
12 competitive, peer-reviewed basis as determined
13 by an independent panel of scientific and tech-
14 nical peers; and

15 (C) activities under this Act are carried
16 out in accordance with this Act.

17 (d) COORDINATION.—The Advisory Committee shall
18 coordinate its activities with other Federal advisory com-
19 mittees working in related areas to avoid duplication of
20 effort.

21 (e) MEETINGS.—The Advisory Committee shall meet
22 at least quarterly.

23 (f) FEDERAL ADVISORY COMMITTEE ACT.—The Ad-
24 visory Committee shall not be subject to section 14 of the
25 Federal Advisory Committee Act.

1 **SEC. 7. BIOMASS RESEARCH AND DEVELOPMENT INITIA-**
2 **TIVE.**

3 (a) IN GENERAL.—The Secretary of Energy and the
4 Secretary of Agriculture, acting through their respective
5 points of contact and in consultation with the Board, shall
6 establish and carry out a Biomass Research and Develop-
7 ment Initiative under which competitively awarded grants,
8 contracts, and other financial assistance are provided to,
9 or entered into with, eligible entities to carry out research,
10 development, and demonstration with respect to biobased
11 products.

12 (b) PURPOSES.—The purposes of grants, contracts,
13 and other financial assistance under this section shall be
14 to—

15 (1) stimulate collaborative activities by a di-
16 verse range of experts in all aspects of biomass pro-
17 duction and processing for the purpose of conducting
18 basic and applied research, development, and dem-
19 onstration with respect to biobased products;

20 (2) enhance creative and imaginative ap-
21 proaches toward biomass processing that will serve
22 to develop the next generation of advanced tech-
23 nologies making possible low-cost biobased products;

24 (3) strengthen the intellectual resources of the
25 United States through the training and education of

1 future scientists, engineers, managers, and business
2 leaders in the field of biomass processing; and

3 (4) promote integrated research partnerships
4 among institutions of higher education, national lab-
5 oratories, Federal research agencies, State research
6 agencies, and the private sector as the best means
7 of overcoming technical challenges that span mul-
8 tiple academic disciplines and leveraging scarce Fed-
9 eral research funds.

10 (c) ELIGIBLE ENTITIES.—

11 (1) IN GENERAL.—To be eligible for a grant,
12 contract, or other financial assistance under this sec-
13 tion, an applicant shall be—

14 (A) an institution of higher education;

15 (B) a national laboratory;

16 (C) a Federal research agency;

17 (D) a State research agency;

18 (E) a private sector entity;

19 (F) a nonprofit organization; or

20 (G) a consortium of 2 or more entities de-
21 scribed in subparagraphs (A) through (F).

22 (2) UNFAIR COMPETITION PROTECTION.—Be-
23 fore awarding a grant, contract, or other financial
24 assistance under this section, a Federal agency shall
25 issue regulations establishing procedures to ensure

1 that no class of applicants has an unfair advantage
2 in competition for the award.

3 (3) ADMINISTRATION.—After consultation with
4 the Board, the points of contact shall—

5 (A) publish annually a joint request for
6 proposals for grants, contracts, and other finan-
7 cial assistance under this section;

8 (B) provide a preference in grants, con-
9 tracts, and other financial assistance under this
10 section to consortia involving experts from mul-
11 tiple institutions and multiple academic dis-
12 ciplines working on cross-cutting or integrative
13 research, development, and demonstration chal-
14 lenges; and

15 (C) require that grants, contracts, and
16 other financial assistance under this section be
17 awarded competitively after the establishment
18 of procedures that provide for scientific peer re-
19 view by an independent panel of scientific and
20 technical peers.

21 (d) USES OF GRANTS, CONTRACTS, AND ASSIST-
22 ANCE.—A grant, contract, or other financial assistance
23 under this section shall be used to conduct—

24 (1) research and development in technologies or
25 processes determined by the Advisory Committee to

1 be consistent with the purposes described in sub-
2 section (b);

3 (2) research into the sustainability and long-
4 term environmental impacts of the technologies or
5 processes;

6 (3) research into the economic viability (includ-
7 ing the cost, net energy use, and comparative energy
8 use) of the technologies or processes; or

9 (4) pilot projects of processes and technologies
10 that lead to a better understanding of the energy or
11 environmental impacts or performance characteris-
12 tics of a biobased product.

13 Grants, contracts, and other financial assistance shall not
14 be provided under this section for a demonstration project
15 unless at least an equal amount of funding is obtained
16 for such project from non-Federal sources.

17 (e) AUTHORIZATION OF APPROPRIATIONS.—There
18 are authorized to be appropriated to carry out this Act
19 \$49,000,000 for each of the fiscal years 2000 through
20 2005.

21 **SEC. 8. ADMINISTRATIVE SUPPORT AND FUNDS.**

22 (a) IN GENERAL.—To the extent administrative sup-
23 port and funds are not provided by other agencies under
24 subsection (b), the Secretary of Energy shall provide such
25 administrative support and funds of the Department of

1 Energy to the Board and the Advisory Committee as are
2 necessary to enable the Board and the Advisory Com-
3 mittee to carry out this Act.

4 (b) OTHER AGENCIES.—The Secretary of Agriculture
5 and the heads of the agencies referred to in section 5(b)(3)
6 may, and are encouraged to, provide administrative sup-
7 port and funds of their respective agencies to the Board
8 and the Advisory Committee.

9 **SEC. 9. REPORTS.**

10 (a) INITIAL REPORT.—Not later than 6 months after
11 the date of enactment of this Act, the Secretary of Energy
12 and the Secretary of Agriculture shall jointly transmit a
13 report to Congress that—

14 (1) identifies the points of contact, the members
15 of the Board, and the members of the Advisory
16 Committee;

17 (2) describes the status of current biobased
18 product research, development, and demonstration
19 efforts in both the Federal Government and the pri-
20 vate sector;

21 (3) includes a section prepared by the Board
22 that establishes a set of criteria to assess the poten-
23 tial of biobased products, which shall include for
24 both biomass production and transformation into
25 biobased products an energy accounting, an environ-

1 mental impact assessment, and an economic assess-
2 ment; and

3 (4) describes the research and development
4 goals of the Initiative, including how funds will be
5 allocated in order to accomplish those goals.

6 (b) ANNUAL REPORTS.—For each fiscal year that
7 funds are made available to carry out this Act, the Sec-
8 retary of Energy and the Secretary of Agriculture shall
9 jointly transmit to Congress a detailed report on—

10 (1) the status and progress of the Initiative, in-
11 cluding a report from the Advisory Committee on
12 whether funds appropriated for the Initiative have
13 been distributed and used in a manner that—

14 (A) is consistent with the purposes de-
15 scribed in section 7(b);

16 (B) uses the set of criteria established
17 under subsection (a)(3) of this section; and

18 (C) takes into account any recommenda-
19 tions that have been made by the Advisory
20 Committee;

21 (2) the general status of cooperation and re-
22 search, development, and demonstration efforts car-
23 ried out at each agency with respect to biobased
24 products, including a report from the Advisory Com-
25 mittee on whether the points of contact are funding

1 proposals that are selected as required by section
2 7(c)(2)(C); and

3 (3) the plans of the Secretary of Energy and
4 the Secretary of Agriculture for addressing concerns
5 raised in the report, including concerns raised by the
6 Advisory Committee.

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