

119TH CONGRESS
1ST SESSION

S. _____

To expand research relating to the use of forest products, to support research and technologies of the Forest Service, and to establish a mass timber science and education program to respond to the emerging research needs of architects, developers, and the forest products industry.

IN THE SENATE OF THE UNITED STATES

_____ introduced the following bill; which was read twice
and referred to the Committee on _____

A BILL

To expand research relating to the use of forest products, to support research and technologies of the Forest Service, and to establish a mass timber science and education program to respond to the emerging research needs of architects, developers, and the forest products industry.

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 “Forest Bioeconomy
5 Act”.

1 **SEC. 2. BIOECONOMY RESEARCH AND TECHNOLOGY**
2 **TRANSFER.**

3 (a) FOREST PRODUCTS RESEARCH.—The Secretary
4 of Agriculture (referred to in this section as the “Sec-
5 retary”), in coordination with the Secretary of Energy,
6 shall expand research relating to the use of wood—

7 (1) to facilitate the establishment of new mar-
8 kets, including nontraditional markets, for material
9 produced from forest management projects that typi-
10 cally has little or no commercial value;

11 (2) to increase the economic viability of manu-
12 facturing products using material described in para-
13 graph (1); and

14 (3) as a feedstock for the production of renew-
15 able fuel, including sustainable aviation fuel.

16 (b) OFFICE OF TECHNOLOGY TRANSFER.—

17 (1) ESTABLISHMENT.—There is established
18 within the Forest Service an Office of Technology
19 Transfer (referred to this subsection as the “Of-
20 fice”).

21 (2) MISSION.—The mission of the Office shall
22 be—

23 (A) to expand the commercial impact of
24 the research investments of the Forest Service;
25 and

1 (B) to provide for the commercialization of
2 technologies that support the mission of the
3 Forest Service.

4 (3) CHIEF COMMERCIALIZATION OFFICER.—

5 (A) IN GENERAL.—The Office shall be
6 headed by an officer, who shall—

7 (i) be known as the “Chief Commer-
8 cialization Officer”; and

9 (ii) report to the Deputy Chief of the
10 Forest Service for Research and Develop-
11 ment.

12 (B) QUALIFICATIONS.—An individual ap-
13 pointed to the position of Chief Commercializa-
14 tion Officer shall be an individual who, by rea-
15 son of professional background and experience,
16 is specially qualified to advise the Chief of the
17 Forest Service and the Deputy Chief of the
18 Forest Service for Research and Development
19 on technology transfer at the Forest Service.

20 (C) DUTIES.—The Chief Commercializa-
21 tion Officer shall—

22 (i) oversee the expenditure of funds
23 allocated for technology transfer within the
24 Forest Service;

25 (ii) represent the Forest Service on—

1 (I) the Federal Laboratory Con-
2 sortium for Technology Transfer es-
3 tablished by section 11(e) of the Ste-
4 venson-Wylder Technology Innovation
5 Act of 1980 (15 U.S.C. 3710(e)); and

6 (II) other similar interagency co-
7 ordinating entities;

8 (iii) coordinate with—

9 (I) other technology transfer and
10 commercialization offices within the
11 Department of Agriculture; and

12 (II) other similar Federal enti-
13 ties, as appropriate;

14 (iv) oversee efforts to engage with pri-
15 vate sector entities, including venture cap-
16 ital companies, on issues relating to tech-
17 nology transfer and commercialization; and

18 (v) coordinate efforts to patent or oth-
19 erwise protect under title 35, United
20 States Code, any inventions arising from a
21 Forest Service laboratory.

22 (4) TECHNOLOGY TRANSFER WORKING
23 GROUP.—

24 (A) ESTABLISHMENT.—The Secretary
25 shall establish within the Forest Service a Tech-

1 nology Transfer Working Group, which shall
2 consist of—

3 (i) the Deputy Chief of the Forest
4 Service for Research and Development;

5 (ii) the Chief Commercialization Offi-
6 cer appointed under paragraph (3);

7 (iii) representatives from each re-
8 search station within the Forest Service;
9 and

10 (iv) representatives from other Forest
11 Service entities with relevant expertise, as
12 appropriate.

13 (B) DUTIES.—The Technology Transfer
14 Working Group established under subparagraph
15 (A) shall—

16 (i) assist with the coordination of
17 technology transfer and commercialization
18 opportunities occurring at Forest Service
19 laboratories;

20 (ii) develop and disseminate guidance
21 to researchers at Forest Service labora-
22 tories on technology transfer and commer-
23 cialization requirements under the Steven-
24 son-Wydler Technology Innovation Act of
25 1980 (15 U.S.C. 3701 et seq.) and associ-

1 ated agreements to implement those re-
2 quirements; and

3 (iii) develop and disseminate to the
4 public and prospective technology partners
5 information about opportunities and proce-
6 dures for technology transfer with the For-
7 est Service.

8 (C) REPORT.—Not later than 1 year after
9 the date of enactment of this Act, the Tech-
10 nology Transfer Working Group established
11 under subparagraph (A) shall submit to Con-
12 gress a report that describes—

13 (i) the number of cooperative research
14 and development agreements entered into
15 by the Forest Service under section 12 of
16 the Stevenson-Wydler Technology Innova-
17 tion Act of 1980 (15 U.S.C. 3710a) during
18 the preceding 5 years;

19 (ii) the number of agreements with
20 partnership intermediaries entered into by
21 the Forest Service under section 23 of the
22 Stevenson-Wydler Technology Innovation
23 Act of 1980 (15 U.S.C. 3715) during the
24 preceding 5 years;

1 (iii) the number of licenses and other
2 use authorizations issued by the Forest
3 Service for patents held by the Forest
4 Service during the preceding 5 years; and
5 (iv) recommendations for legislative,
6 programmatic, or regulatory changes to
7 support the mission of the Office.

8 (5) KEY PERFORMANCE INDICATORS.—Begin-
9 ning with the first year after the report under para-
10 graph (4)(C) is submitted, and each year thereafter,
11 the President shall include in the budget of the
12 United States Government submitted to Congress
13 under section 1105 of title 31, United States Code—

14 (A) the number of cooperative research
15 and development agreements entered into by
16 the Forest Service under section 12 of the Ste-
17 venson-Wydler Technology Innovation Act of
18 1980 (15 U.S.C. 3710a) during the preceding
19 year;

20 (B) the number of agreements with part-
21 nership intermediaries entered into by the For-
22 est Service under section 23 of the Stevenson-
23 Wydler Technology Innovation Act of 1980 (15
24 U.S.C. 3715) during the preceding year; and

1 (C) the number of licenses or other use au-
2 thorizations issued by the Forest Service for
3 patents held by the Forest Service during the
4 preceding year.

5 (6) AUTHORIZATION OF APPROPRIATIONS.—

6 There is authorized to be appropriated to the Sec-
7 retary to carry out this subsection \$5,000,000 for
8 each fiscal year.

9 (c) NATIONAL FOREST FOUNDATION ACTIVITIES.—

10 Section 402(b)(3) of the National Forest Foundation Act
11 (16 U.S.C. 583j(b)(3)) is amended by striking “coopera-
12 tive forestry” and inserting “technology transfer, commer-
13 cialization, cooperative forestry,”.

14 (d) SMALL BUSINESS VOUCHER PILOT PROGRAM.—

15 (1) ESTABLISHMENT.—The Secretary, in con-
16 sultation with the Secretary of Energy and the Ad-
17 ministrator of the Small Business Administration,
18 shall establish an innovation voucher pilot program
19 to accelerate product development, demonstration,
20 and commercialization in the forest products sector.

21 (2) VOUCHERS.—Under the pilot program es-
22 tablished under paragraph (1), the Secretary shall
23 provide vouchers to small business concerns (as de-
24 fined in section 3 of the Small Business Act (15
25 U.S.C. 632)) to be used at research facilities of the

1 Forest Service for research, development, dem-
2 onstration, technology transfer, skills training and
3 workforce development, or commercial application
4 activities.

5 (3) COST SHARING.—

6 (A) BASIC RESEARCH.—The Secretary
7 may require up to 20 percent of the cost of a
8 voucher provided under paragraph (2) for a re-
9 search or development activity that is of a basic
10 or fundamental nature, at the discretion of the
11 Secretary, to be provided by a non-Federal
12 source.

13 (B) APPLIED RESEARCH.—Except as pro-
14 vided in subparagraph (D), the Secretary shall
15 require not less than 20 percent of the cost of
16 a voucher provided under paragraph (2) for a
17 research or development activity that is not of
18 a basic or fundamental nature, at the discretion
19 of the Secretary, to be provided by a non-Fed-
20 eral source.

21 (C) DEMONSTRATION AND COMMERCIAL
22 APPLICATION.—Except as provided in subpara-
23 graph (D), the Secretary shall require not less
24 than 50 percent of the cost of a voucher pro-
25 vided under paragraph (2) for a demonstration

1 or commercial application activity to be pro-
2 vided by a non-Federal source.

3 (D) REDUCTION IN COST-SHARE.—The
4 Secretary may reduce a non-Federal share re-
5 quired under subparagraph (B) or (C) if the
6 Secretary determines the reduction to be nec-
7 essary and appropriate, taking into account any
8 technological risk relating to the activity.

9 (4) TERMINATION.—The authorities provided
10 under this subsection (except for paragraph (5))
11 shall expire on September 30, 2031.

12 (5) REPORT.—Not later than 180 days after
13 the termination of the pilot program under para-
14 graph (4), the Secretary shall submit to Congress a
15 report describing the outcomes of the pilot program,
16 including any recommendations to improve the pilot
17 program.

18 **SEC. 3. JOINT MASS TIMBER SCIENCE AND EDUCATION**
19 **PROGRAM.**

20 (a) DEFINITIONS.—In this section:

21 (1) MASS TIMBER.—The term “mass timber”
22 includes—

23 (A) cross-laminated timber;

24 (B) nail laminated timber;

25 (C) glue laminated timber;

- 1 (D) dowel laminated timber;
- 2 (E) laminated strand lumber; and
- 3 (F) laminated veneer lumber.

4 (2) SECRETARY.—The term “Secretary” means
5 the Secretary of Agriculture, acting through the
6 Deputy Chief of the Forest Service for Research and
7 Development.

8 (3) TALL WOOD BUILDING.—The term “tall
9 wood building” means a building designed to be—

- 10 (A) constructed with mass timber; and
- 11 (B)(i) in the case of a residential building,
12 more than 4 stories in height; or
- 13 (ii) in the case of a commercial building,
14 more than 5 stories in height.

15 (b) MASS TIMBER SCIENCE AND EDUCATION PRO-
16 GRAM.—The Secretary shall establish a mass timber
17 science and education program to respond to the emerging
18 research needs of architects, real estate developers, and
19 the forest products industry.

20 (c) COORDINATION.—The Secretary shall coordinate
21 with research programs at colleges and universities in ad-
22 ministering the mass timber science and education pro-
23 gram established under subsection (b) to supplement the
24 current research and educational efforts of colleges and
25 universities.

1 (d) PURPOSES.—The mass timber science and edu-
2 cation program established under subsection (b) shall have
3 the following principal purposes:

4 (1) To provide practical research responsive to
5 the needs of architects, real estate developers, and
6 the forest products industry, including assessments
7 of carbon impacts in the originating forests and the
8 end use of mass timber in the built environment.

9 (2) To develop focused, strategic lines of new
10 research responsive to the needs described in para-
11 graph (1), including research relating to flamma-
12 bility and performance during a fire, structural char-
13 acteristics, energy use and savings, acoustics, and
14 slab construction composed of hybrid materials.

15 (3) To solicit competitive funding proposals
16 from scientists selected through a rigorous peer-re-
17 view process designed to ensure the best projects are
18 funded.

19 (4) To disseminate research findings so that ar-
20 chitects, real estate developers, and the forest prod-
21 ucts industry are aware of, understand, and can use
22 the information to make sound decisions and imple-
23 ment projects.

24 (5) To develop and facilitate the voluntary
25 adoption of a curriculum for building structures

1 using mass timber for use in schools of engineering
2 and architecture that includes—

3 (A) structural design; and

4 (B) the possibilities, benefits, and limita-
5 tions of using mass timber in construction.

6 (e) MASS TIMBER STRATEGY.—Not later than Sep-
7 tember 30, 2026, the Secretary shall submit to the rel-
8 evant committees of Congress a strategy to carry out the
9 mass timber science and education program established
10 under subsection (b) that includes—

11 (1) an assessment of the current state of knowl-
12 edge about mass timber and tall wood buildings;

13 (2) an integrated approach to improve knowl-
14 edge sharing on the manufacturing and use of mass
15 timber products;

16 (3) an approach for mass timber project moni-
17 toring and evaluation; and

18 (4) an approach for setting research priorities
19 for the program.

20 (f) STAKEHOLDER ADVISORY GROUP.—

21 (1) MEMBERSHIP.—The Secretary shall appoint
22 a stakeholder advisory group of technical experts
23 that consists, at a minimum, of—

24 (A) a Forest Service scientist;

1 (B) a researcher from a college or univer-
2 sity;

3 (C) a representative of a trade association;

4 (D) an architect or real estate developer;

5 (E) a representative of an agency or unit
6 of a local government that is responsible for the
7 issuance of permits for building construction
8 (commonly known as a “local approving agen-
9 cy”);

10 (F) a representative of a forest products
11 company; and

12 (G) a representative of a nongovernmental
13 organization with experience—

14 (i) designing or constructing tall wood
15 buildings; or

16 (ii) complying with or revising related
17 building codes.

18 (2) DUTIES.—The stakeholder advisory group
19 shall meet at least annually—

20 (A) to consider immediate and long-term
21 science needs relating to the use of mass timber
22 and the construction of tall wood buildings;

23 (B) to suggest to the Secretary appropriate
24 topic areas, specific issues within those topic
25 areas, and information transfer needs for which

1 the Secretary shall solicit proposals described in
2 subsection (d)(3); and

3 (C) to assist the Secretary in drafting the
4 strategy required under subsection (e).

5 (g) AVAILABILITY OF APPROPRIATIONS.—From
6 amounts appropriated for Forest Service research, exclud-
7 ing funding made available for the Forest Inventory and
8 Analysis program, the Secretary may use not more than
9 \$4,000,000 to carry out the activities described in this sec-
10 tion.