

Capito Substitute

ABG19803

S.L.C.

Shelley Moore Capito

AMENDMENT NO. _____ Calendar No. _____

Purpose: In the nature of a substitute.

IN THE SENATE OF THE UNITED STATES—116th Cong., 1st Sess.

S. 999

To provide for Federal coordination of activities supporting sustainable chemistry, and for other purposes.

Referred to the Committee on _____ and ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT IN THE NATURE OF A SUBSTITUTE intended to be proposed by Mrs. CAPITO (for herself and Ms. KLOBUCHAR)

Viz:

- 1 Strike all after the enacting clause and insert the fol-
- 2 lowing:
- 3 **SECTION 1. SHORT TITLE.**
- 4 This Act may be cited as the "Sustainable Chemistry
- 5 Research and Development Act of 2019".
- 6 **SEC. 2. FINDINGS.**
- 7 Congress finds that—
- 8 (1) Congress recognized the importance and
- 9 value of sustainable chemistry and the role of the
- 10 Federal Government in section 114 of the American

1 Innovation and Competitiveness Act (Public Law
2 114–329);

3 (2) sustainable chemistry and materials trans-
4 formation is a key value contributor to business
5 competitiveness across many industrial and con-
6 sumer sectors;

7 (3) companies across hundreds of supply chains
8 critical to the American economy are seeking to re-
9 duce costs and open new markets through innova-
10 tions in manufacturing and materials, and are in
11 need of new innovations in chemistry, including sus-
12 tainable chemistry;

13 (4) sustainable chemistry can improve the effi-
14 ciency with which natural resources are used to meet
15 human needs for chemical products while avoiding
16 environmental harm, reduce or eliminate the emis-
17 sions of and exposures to hazardous substances,
18 minimize the use of resources, and benefit the econ-
19 omy, people, and the environment; and

20 (5) a recent report by the Government Account-
21 ability Office (GAO–18–307) found that the Federal
22 Government could play an important role in helping
23 realize the full innovation and market potential of
24 sustainable chemistry technologies, including
25 through a coordinated national effort on sustainable

1 chemistry and standardized tools and definitions to
2 support sustainable chemistry research, development,
3 demonstration, and commercialization.

4 **SEC. 3. NATIONAL COORDINATING ENTITY FOR SUSTAIN-**
5 **ABLE CHEMISTRY.**

6 (a) **ESTABLISHMENT.**—Not later than 180 days after
7 the date of enactment of this Act, the Director of the Of-
8 fice of Science and Technology Policy shall convene an
9 interagency entity (referred to in this Act as the “Entity”)
10 under the National Science and Technology Council with
11 the responsibility to coordinate Federal programs and ac-
12 tivities in support of sustainable chemistry, including
13 those described in sections 5 and 6.

14 (b) **COORDINATION WITH EXISTING GROUPS.**—In
15 convening the Entity, the Director of the Office of Science
16 and Technology Policy shall consider overlap and possible
17 coordination with existing committees, subcommittees, or
18 other groups of the National Science and Technology
19 Council, such as—

20 (1) the Committee on Environment;

21 (2) the Committee on Technology;

22 (3) the Committee on Science; or

23 (4) related groups or subcommittees.

24 (c) **CO-CHAIRS.**—The Entity shall be co-chaired by
25 the Director of the Office of Science and Technology Pol-

1 icy and a representative from the Environmental Protec-
2 tion Agency, the National Institute of Standards and
3 Technology, the National Science Foundation, or the De-
4 partment of Energy, as selected by the Director of the
5 Office of Science and Technology Policy.

6 (d) AGENCY PARTICIPATION.—The Entity shall in-
7 clude representatives, including subject matter experts,
8 from the Environmental Protection Agency, the National
9 Institute of Standards and Technology, the National
10 Science Foundation, the Department of Energy, the De-
11 partment of Agriculture, the Department of Defense, the
12 National Institutes of Health, the Centers for Disease
13 Control and Prevention, the Food and Drug Administra-
14 tion, and other related Federal agencies, as appropriate.

15 (e) TERMINATION.—The Entity shall terminate on
16 the date that is 10 years after the date of enactment of
17 this Act.

18 **SEC. 4. STRATEGIC PLAN FOR SUSTAINABLE CHEMISTRY.**

19 (a) STRATEGIC PLAN.—Not later than 2 years after
20 the date of enactment of this Act, the Entity shall—

21 (1) consult with relevant stakeholders, including
22 representatives from industry, academia, national
23 labs, the Federal Government, and international en-
24 tities, to develop and update, as needed, a consensus

1 definition of “sustainable chemistry” to guide the
2 activities under this Act;

3 (2) develop a working framework of attributes
4 characterizing and metrics for assessing sustainable
5 chemistry, as described in subsection (b);

6 (3) assess the state of sustainable chemistry in
7 the United States as a key benchmark from which
8 progress under the activities described in this Act
9 can be measured, including assessing key sectors of
10 the United States economy, key technology plat-
11 forms, commercial priorities, and barriers to innova-
12 tion;

13 (4) coordinate and support Federal research,
14 development, demonstration, technology transfer,
15 commercialization, education, and training efforts in
16 sustainable chemistry, including budget coordination
17 and support for public-private partnerships, as ap-
18 propriate;

19 (5) identify any Federal regulatory barriers to,
20 and opportunities for, Federal agencies facilitating
21 the development of incentives for development, con-
22 sideration and use of sustainable chemistry processes
23 and products;

24 (6) identify major scientific challenges, road-
25 blocks, or hurdles to transformational progress in

1 improving the sustainability of the chemical sciences;
2 and

3 (7) identify other opportunities for expanding
4 Federal efforts in support of sustainable chemistry.

5 (b) CHARACTERIZING AND ASSESSING SUSTAINABLE
6 CHEMISTRY.—The Entity shall develop a working frame-
7 work of attributes characterizing and metrics for assessing
8 sustainable chemistry for the purposes of carrying out the
9 Act. In developing this framework, the Entity shall—

10 (1) seek advice and input from stakeholders as
11 described in subsection (c);

12 (2) consider existing definitions of, or frame-
13 works characterizing and metrics for assessing, sus-
14 tainable chemistry already in use at Federal agen-
15 cies;

16 (3) consider existing definitions of, or frame-
17 works characterizing and metrics for assessing, sus-
18 tainable chemistry already in use by international
19 organizations of which the United States is a mem-
20 ber, such as the Organisation for Economic Co-oper-
21 ation and Development; and

22 (4) consider any other appropriate existing defi-
23 nitions of, or frameworks characterizing and metrics
24 for assessing, sustainable chemistry.

1 (e) CONSULTATION.—In carrying out the duties de-
2 scribed in subsections (a) and (b), the Entity shall consult
3 and coordinate with stakeholders qualified to provide ad-
4 vice and information to guide Federal activities related to
5 sustainable chemistry through workshops, requests for in-
6 formation, or other mechanisms as necessary. The stake-
7 holders shall include representatives from—

8 (1) business and industry (including trade asso-
9 ciations and small- and medium-sized enterprises
10 from across the value chain);

11 (2) the scientific community (including the Na-
12 tional Academies of Sciences, Engineering, and Med-
13 icine, scientific professional societies, national labs,
14 and academia);

15 (3) the defense community;

16 (4) State, tribal, and local governments, includ-
17 ing nonregulatory State or regional sustainable
18 chemistry programs, as appropriate;

19 (5) nongovernmental organizations; and

20 (6) other appropriate organizations.

21 (d) REPORT TO CONGRESS.—

22 (1) IN GENERAL.—Not later than 3 years after
23 the date of enactment of this Act, the Entity shall
24 submit a report to the Committee on Environment
25 and Public Works, the Committee on Commerce,

1 Science, and Transportation, and the Committee on
2 Appropriations of the Senate, and the Committee on
3 Science, Space, and Technology, the Committee on
4 Energy and Commerce, and the Committee on Ap-
5 propriations of the House of Representatives. In ad-
6 dition to the elements described in subsections (a)
7 and (b), the report shall include—

8 (A) a summary of federally funded, sus-
9 tainable chemistry research, development, dem-
10 onstration, technology transfer, commercializa-
11 tion, education, and training activities;

12 (B) a summary of the financial resources
13 allocated to sustainable chemistry initiatives;

14 (C) an assessment of the current state of
15 sustainable chemistry in the United States, in-
16 cluding the role that Federal agencies are play-
17 ing in supporting it;

18 (D) an analysis of the progress made to-
19 ward achieving the goals and priorities of this
20 Act, and any recommendations for future pro-
21 gram activities; and

22 (E) an evaluation of steps taken and fu-
23 ture strategies to avoid duplication of efforts,
24 streamline interagency coordination, facilitate

1 information sharing, and spread best practices
2 among participating agencies.

3 (2) SUBMISSION TO GAO.—The Entity shall
4 also submit the report described in paragraph (1) to
5 the Comptroller General of the United States for
6 consideration in future Congressional inquiries.

7 **SEC. 5. AGENCY ACTIVITIES IN SUPPORT OF SUSTAINABLE**
8 **CHEMISTRY.**

9 (a) IN GENERAL.—The agencies participating in the
10 Entity shall carry out activities in support of sustainable
11 chemistry, as appropriate to the specific mission and pro-
12 grams of each agency.

13 (b) ACTIVITIES.—The activities described in sub-
14 section (a) shall—

15 (1) incorporate sustainable chemistry into exist-
16 ing basic and applied research, development, dem-
17 onstration, technology transfer, commercialization,
18 education, and training programs, that the agency
19 determines to be relevant, including consideration
20 of—

21 (A) merit-based competitive grants to indi-
22 vidual investigators and teams of investigators,
23 including, to the extent practicable, early career
24 investigators for research and development;

1 (B) grants to fund collaborative research
2 and development partnerships among univer-
3 sities, industry, and nonprofit organizations;

4 (C) coordination of sustainable chemistry
5 research, development, demonstration, and tech-
6 nology transfer conducted at Federal labora-
7 tories and agencies;

8 (D) incentive prize competitions and chal-
9 lenges in coordination with such existing Fed-
10 eral agency programs; and

11 (E) grants, loans, and loan guarantees to
12 aid in the technology transfer and commer-
13 cialization of sustainable chemicals, materials,
14 processes, and products;

15 (2) collect and disseminate information on sus-
16 tainable chemistry research, development, technology
17 transfer, and commercialization, including informa-
18 tion on accomplishments and best practices;

19 (3) within education and training programs, ex-
20 pand the education and training of undergraduate
21 and graduate students and professional scientists
22 and engineers, and other professionals involved in all
23 aspects of sustainable chemistry and engineering, in-
24 cluding through partnerships with industry as de-
25 scribed in section 6;

1 (4) as relevant to an agency's programs, exam-
2 ine methods by which the Federal agencies, in col-
3 laboration and consultation with the National Insti-
4 tute of Standards and Technology, can facilitate the
5 development or recognition of validated, standard-
6 ized tools for performing sustainability assessments
7 of chemistry processes or products;

8 (5) through programs identified by an agency,
9 support (including through technical assistance, par-
10 ticipation, financial support, communications tools,
11 awards, or other forms of support) outreach and dis-
12 semination of sustainable chemistry advances such
13 as non-Federal symposia, forums, conferences, and
14 publications in collaboration with, as appropriate, in-
15 dustry, academia, scientific and professional soci-
16 eties, and other relevant groups;

17 (6) provide for public input and outreach to be
18 integrated into the activities described in this section
19 by the convening of public discussions, through
20 mechanisms such as public meetings, consensus con-
21 ferences, and educational events, as appropriate;

22 (7) within each agency, develop or adapt
23 metrics to track the outputs and outcomes of the
24 programs supported by that agency; and

1 (8) incentivize or recognize actions that advance
2 sustainable chemistry products, processes, or initia-
3 tives, including through the establishment of a na-
4 tionally recognized awards program through the En-
5 vironmental Protection Agency to identify, publicize,
6 and celebrate innovations in sustainable chemistry
7 and chemical technologies.

8 (e) LIMITATIONS .—Financial support provided
9 under this section shall—

10 (1) be available only for pre-competitive activi-
11 ties; and

12 (2) not be used to promote the sale of a specific
13 product, process, or technology, or to disparage a
14 specific product, process, or technology.

15 **SEC. 6. PARTNERSHIPS IN SUSTAINABLE CHEMISTRY.**

16 (a) IN GENERAL.—The agencies participating in the
17 Entity may facilitate and support, through financial, tech-
18 nical, or other assistance, the creation of partnerships be-
19 tween institutions of higher education, nongovernmental
20 organizations, consortia, or companies across the value
21 chain in the chemical industry, including small- and me-
22 dium-sized enterprises, to—

23 (1) create collaborative sustainable chemistry
24 research, development, demonstration, technology
25 transfer, and commercialization programs; and

1 (2) train students and retrain professional sci-
2 entists, engineers, and others involved in materials
3 specification on the use of sustainable chemistry con-
4 cepts and strategies by methods, including—

5 (A) developing or recognizing curricular
6 materials and courses for undergraduate and
7 graduate levels and for the professional develop-
8 ment of scientists, engineers, and others in-
9 volved in materials specification; and

10 (B) publicizing the availability of profes-
11 sional development courses in sustainable chem-
12 istry and recruiting professionals to pursue
13 such courses.

14 (b) PRIVATE SECTOR PARTICIPATION.—To be eligi-
15 ble for support under this section, a partnership in sus-
16 tainable chemistry shall include at least one private sector
17 organization.

18 (c) SELECTION OF PARTNERSHIPS.—In selecting
19 partnerships for support under this section, the agencies
20 participating in the Entity shall also consider the extent
21 to which the applicants are willing and able to dem-
22 onstrate evidence of support for, and commitment to, the
23 goals outlined in the strategic plan and report described
24 in section 4.

1 (d) PROHIBITED USE OF FUNDS.—Financial support
2 provided under this section may not be used—

3 (1) to support or expand a regulatory chemical
4 management program at an implementing agency
5 under a State law;

6 (2) to construct or renovate a building or struc-
7 ture; or

8 (3) to promote the sale of a specific product,
9 process, or technology, or to disparage a specific
10 product, process, or technology.

11 **SEC. 7. PRIORITIZATION.**

12 In carrying out this Act, the Entity shall focus its
13 support for sustainable chemistry activities on those that
14 achieve, to the highest extent practicable, the goals out-
15 lined in the Act.

16 **SEC. 8. RULE OF CONSTRUCTION.**

17 Nothing in this Act shall be construed to alter or
18 amend any State law or action with regard to sustainable
19 chemistry, as defined by the State.