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108TH CONGRESS, 2d Session | HOUSE OF REPRESENTATIVES | REPORT 108–462

GREEN CHEMISTRY RESEARCH AND DEVELOPMENT ACT OF 2004

APRIL 14, 2004.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. BOEHLERT, from the Committee on Science, submitted the following

R E P O R T

together with

MINORITY VIEWS

[To accompany H.R. 3970]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 3970) to provide for the implementation of a Green Chemistry Research and Development Program, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

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I. AMENDMENT

The amendment is as follows:

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Green Chemistry Research and Development Act of 2004".

SEC. 2. DEFINITIONS.

In this Act—

(1) the term "green chemistry" means chemistry and chemical engineering to design chemical products and processes that reduce or eliminate the use or generation of hazardous substances;

(2) the term "Interagency Working Group" means the interagency working group established under section 3(c); and

(3) the term "Program" means the Green Chemistry Research and Development Program described in section 3.

SEC. 3. GREEN CHEMISTRY RESEARCH AND DEVELOPMENT PROGRAM.

(a) IN GENERAL.—The President shall establish a Green Chemistry Research and Development Program to promote and coordinate Federal green chemistry research, development, demonstration, education, and technology transfer activities.

(b) PROGRAM ACTIVITIES.—The activities of the Program shall be designed to—

(1) provide sustained support for green chemistry research, development, demonstration, education, and technology transfer through—

(A) merit-reviewed competitive grants to individual investigators and teams of investigators, including, to the extent practicable, young investigators, for research and development;

(B) grants to fund collaborative research and development partnerships among universities, industry, and nonprofit organizations;

(C) green chemistry research, development, demonstration, and technology transfer conducted at Federal laboratories; and

(D) to the extent practicable, encouragement of consideration of green chemistry in—

(i) the conduct of Federal chemical science and engineering research and development; and

(ii) the solicitation and evaluation of all proposals for chemical science and engineering research and development;

(2) examine methods by which the Federal Government can create incentives for consideration and use of green chemistry processes and products;

(3) facilitate the adoption of green chemistry innovations;

(4) expand education and training of undergraduate and graduate students, and professional chemists and chemical engineers, including through partnerships with industry, in green chemistry science and engineering;

(5) collect and disseminate information on green chemistry research, development, and technology transfer, including information on—

(A) incentives and impediments to development and commercialization;

(B) accomplishments;

(C) best practices; and

(D) costs and benefits; and

(6) provide venues for outreach and dissemination of green chemistry advances such as symposia, forums, conferences, and written materials in collaboration with, as appropriate, industry, academia, scientific and professional societies, and other relevant groups.

(c) INTERAGENCY WORKING GROUP.—The President shall establish an Interagency Working Group, which shall include representatives from the National Science Foundation, the National Institute of Standards and Technology, the Department of Energy, the Environmental Protection Agency, and any other agency that the President may designate. The Director of the National Science Foundation and the Assistant Administrator for Research and Development of the Environmental Protection Agency shall serve as co-chairs of the Interagency Working Group. The Interagency Working Group shall oversee the planning, management, and coordination of the Program. The Interagency Working Group shall—

(1) establish goals and priorities for the Program, to the extent practicable in consultation with green chemistry researchers and potential end-users of green chemistry products and processes; and

(2) provide for interagency coordination, including budget coordination, of activities under the Program.

(d) REPORT TO CONGRESS.—Not later than 2 years after the date of enactment of this Act, the Interagency Working Group shall transmit a report to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate. This report shall include—

(1) a summary of federally funded green chemistry research, development, demonstration, education, and technology transfer activities, including the green chemistry budget for each of these activities; and

(2) an analysis of the progress made toward achieving the goals and priorities for the Program, and recommendations for future program activities.

SEC. 4. BIENNIAL REPORT.

Section 37(a) of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885d(a)) is amended by striking "By January 30, 1982, and biennially thereafter" and inserting "By January 30 of each odd-numbered year".

SEC. 5. MANUFACTURING EXTENSION CENTER GREEN SUPPLIERS NETWORK GRANT PROGRAM.

Section 25(a) of the National Institute of Standards and Technology Act (15 U.S.C. 278k(a)) is amended—

(1) by striking "and" at the end of paragraph (4);

(2) by striking the period at the end of paragraph (5) and inserting "; and"; and

(3) by adding at the end the following:

"(6) the enabling of supply chain manufacturers to continuously improve products and processes, increase energy efficiency, identify cost-saving opportunities, and optimize resources and technologies with the aim of reducing or eliminating the use or generation of hazardous substances.".

SEC. 6. AUTHORIZATION OF APPROPRIATIONS.

(a) NATIONAL SCIENCE FOUNDATION.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Science Foundation for carrying out this Act—

(1) $7,000,000 for fiscal year 2005;

(2) $7,500,000 for fiscal year 2006; and

(3) $8,000,000 for fiscal year 2007.

(b) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Institute of Standards and Technology for carrying out this Act—

(1) $5,000,000 for fiscal year 2005;

(2) $5,500,000 for fiscal year 2006; and

(3) $6,000,000 for fiscal year 2007.

(c) DEPARTMENT OF ENERGY.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the Department of Energy for carrying out this Act—

(1) $7,000,000 for fiscal year 2005;

(2) $7,500,000 for fiscal year 2006; and

(3) $8,000,000 for fiscal year 2007.

(d) ENVIRONMENTAL PROTECTION AGENCY.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the Environmental Protection Agency for carrying out this Act—

(1) $7,000,000 for fiscal year 2005;

(2) $7,500,000 for fiscal year 2006; and

(3) $8,000,000 for fiscal year 2007.

II. PURPOSE OF THE BILL

The purpose of H.R. 3970, the Green Chemistry Research and Development Act of 2004, is to establish an interagency research and development (R&D) program to promote and coordinate federal green chemistry research, development, demonstration, education, and technology transfer activities.

III. Background and Need for the Legislation

Green Chemistry

Green chemistry is most commonly defined as chemistry that involves the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. It is sometimes characterized as "benign by design." Also known as sustainable chemistry or benign chemistry, green chemistry seeks to prevent the creation of hazards, instead of focusing on cleaning up waste after the fact.

Examples of green chemistry include the development of pesticide alternatives that are effective at killing target organisms, but are benign to non-target organisms and do not persist in the environment. Another example is the use of the benign solvent, supercritical carbon dioxide, in dry cleaning processes instead of toxic perchloroethylene.

Benefits

In addition to the inherent advantages to human health and the environment, green chemistry can offer economic advantages and improvements to worker safety, public safety, and national security.

Many in the private sector have recognized the potential savings that green chemistry offers. For example, by using benign chemical processes, businesses can avoid the costs associated with treating or cleaning up pollutants. Other savings can come from simply making more efficient use of raw materials (sometimes referred to as "atom economy") and energy. Dow Chemical Company's Midland, Michigan facility is an example of the level of savings a company can achieve. In 1996 Dow partnered with the Natural Resources Defense Council to conduct a thorough review of the facility's processes to identify ways to implement more recycling and substitute benign materials for hazardous ones. By April 1999, after a one-time investment of $3.1 million, the facility had reduced emissions of targeted substances by 43 percent and the amount of targeted wastes by 37 percent primarily through green chemistry innovations. The improvements are saving Dow $5.4 million per year, a 174 percent annual return on investment.[1]

Many other inherent advantages come from green chemistry in the areas of worker safety, public safety, and national security. For example, many chemical processes are conducted at extreme temperature and/or pressure, two conditions that present a potential hazard for workers. Also, many processes involve toxic substances. Green chemistry seeks to design processes that can be conducted at or near room temperature and pressure, and that use benign substances. Both of these steps can improve working conditions for employees, and reduce the costs of liability protections for employers.

Federal Government Programs

The Federal Government supports activities related to green chemistry through agencies including the National Science Foundation (NSF), the Environmental Protection Agency (EPA), the De-

[1] Amato, Ivan, Fortune, New York: July 24, 2000, vol. 142, issue 3, pg. 270U.

partment of Energy (DOE) and the National Institute of Standards and Technology (NIST). Some agencies—EPA, for example—run programs that are focused directly on green chemistry. Other agencies, such as DOE, fund green chemistry as byproducts of efforts to achieve other goals, such as improving energy efficiency. Because some green chemistry investments are direct and some are indirect, and because green chemistry is not broken out in agency budgets, it is difficult to determine the precise level of federal investment in green chemistry.

It is clear however, that the investment in green chemistry and chemical engineering is small as compared to the investment in chemistry and chemical engineering as a whole. In 2000, the four agencies mentioned above spent approximately $540 million on chemistry and chemical engineering R&D; investment in green chemistry R&D was probably close to $40 million. In addition, green chemistry activities are not fully coordinated among the agencies.

The following table (Table 1) indicates what each agency believes it is spending on green chemistry and chemical engineering activities. The table is followed by descriptions of how this money is spent.

TABLE 1

	EPA	NSF	NIST	DOE
FY04 funding	$7 million	$24 million	$4 million	No dollar breakdown available.
FY05 proposal	$5 million	$24 million	$4 million	N/A.
Total Chemistry and Chemical Engineering (2000).	$23 million	$186 million	$39 million	$292 million.

EPA supports both green chemistry research and development (R&D) and outreach efforts to promote green chemistry. The R&D is funded through the Office of Research and Development; the outreach and promotion through the Office of Pollution Prevention and Toxic Substances (OPPTS).

In fiscal year 2004 (FY04), EPA will spend approximately $5 million directly on green chemistry and chemical engineering R&D, both at its own labs and at universities. Approximately half of the money is spent on internal R&D, conducted at EPA's lab in Cincinnati. The lab focuses on developing cross-cutting tools for industry such as benign solvent design software. The other half of this money funds external R&D, through the Science to Achieve Results (STAR) program. As part of the STAR program, EPA and NSF have developed a partnership, the Technologies for a Sustainable Environment (TSE) program, which primarily funds green chemistry and chemical engineering R&D.

The TSE program is the external R&D program most focused on green chemistry in the Federal government. The partnership between EPA and NSF is a model of cooperation. EPA and NSF put out a joint request for proposals, and then award grants based on their own mission. NSF funds more basic green chemistry R&D, while EPA funds more applied R&D. TSE was initiated in 1995 and has awarded 204 grants totaling just over $56 million since then. In the FY05 budget, the Administration has proposed to eliminate EPA's funding for this program.

EPA's green chemistry outreach programs are funded at approximately $2 million in FY04. Among these programs is the annual Presidential Green Chemistry Challenge Award Program, which was initiated in 1996. In FY05, the Administration proposes to increase funding for pollution prevention in OPPTS by $5 million. A portion of this funding would be used for green chemistry activities, including expanding the focus of the awards program.

Outside of the TSE collaboration with EPA, NSF does not put out specific solicitations for green chemistry R&D, but funds a wide range of investigator-driven green chemistry R&D. While NSF does not have a specific line item in the budget for green chemistry activities, NSF estimates that in FY04 it will spend approximately $10.8 million on green chemistry activities in the chemistry division and $13 million on green chemistry activities in the chemical transport systems division. It is difficult to determine the precise level of investment because much of this funding may be used for "multi-purpose" fundamental research that has implications for green chemistry and other research areas.

DOE does not track spending on green chemistry activities, and does not conduct activities that it specifically identifies as green chemistry. However, DOE conducts R&D that has many green chemistry applications. DOE's fundamental research efforts in chemistry are focused on attaining an atomic and molecular level understanding of processes involved in the generation, storage, and use of energy.

NIST has no programs specifically focused on green chemistry, but conducts R&D with implications for, and application to, green chemistry. For example, the Chemical Science and Technology Laboratory produces more accurate measurement methods and standards to enable the development and implementation of green technologies and assess their impact.

H.R. 3970

H.R. 3970 is designed to focus and integrate the Federal Government's green chemistry R&D activities, and to make them a higher priority. H.R. 3970 is also designed to increase education and training in green chemistry.

One impediment to the application of green chemistry is the lack of a chemistry workforce that is skilled in green chemistry techniques. The Act would support undergraduate and graduate education in green chemistry. This should help create a new generation of chemists and chemical engineers who are familiar with green chemistry and its advantages, and can bring those skills to bear in the workplace. The Act would also support continuing education for professional chemists and chemical engineers so that the large existing workforce can be trained in green chemistry techniques.

The coordinated R&D program would also support R&D and demonstration projects at universities, industry and federal labs. This includes industry-university partnerships to facilitate the transfer of new ideas to industry.

In addition, the Act makes information about green chemistry activities readily available through a green chemistry database of accomplishments and best practices. This should aid interested com-

panies in learning about, overcoming barriers to, and implementing green chemistry alternatives.

IV. Summary of Hearings

March 17, 2004—Hearing on the Green Chemistry Research and Development Act of 2004

On March 17, 2004, the Committee on Science held a hearing to receive testimony on federal and private sector green chemistry R&D activities, and on H.R. 3970, the Green Chemistry Research and Development Act of 2004.

The Committee heard from: (1) Dr. Arden Bement, Acting Director, National Science Foundation; (2) Dr. Paul Gilman, Assistant Administrator for Research and Development, Environmental Protection Agency; (3) Dr. Berkeley Cue, Vice President for Pharmaceutical Sciences, Pfizer Global Research and Development; (4) Mr. Steven Bradfield, Vice President of Environmental Development, Shaw Industries, Inc.; and (5) Dr. Edward Woodhouse, Associate Professor of Political Science, Department of Science & Technology Studies, Rensselaer Polytechnic Institute.

Dr. Cue, Mr. Bradfield, and Dr. Woodhouse all expressed their support for the legislation. Dr. Cue stated that Pfizer has difficulty finding chemists and chemical engineers who are already trained in green chemistry. He said that this legislation would help alleviate that problem. Mr. Bradfield stated that the Carpet and Rug Institute supports the legislation. He also said he believed that green chemistry could keep U.S. chemical jobs from moving overseas. Dr. Woodhouse congratulated the Committee for its farsightedness in taking up the legislation.

Both Administration witnesses said they supported the intent of the legislation, and looked forward to working with the Committee on this issue, but argued that the bill was unnecessary.

Dr. Bement testified that NSF already funds a great deal of green chemistry R&D. He stated that NSF currently spends $13 million through the Division of Chemical and Transport Systems and $11 million through the Division of Chemistry on green chemistry activities. These monies support individual investigators, teams of investigators, and research centers, he said. Bement said that NSF currently partners with EPA, DOE and NIST to leverage its green chemistry investments. NSF supports green chemistry research in chemical synthesis, catalysis, separations research, and environmental research, he said.

Dr. Gilman testified that "green chemistry and engineering represent the kind of science on which EPA is focusing to move to the next level of environmental and human health protection." He added that EPA is building interest in green chemistry and engineering in future generations through programs like the P3 Award competition, and is launching a new web portal to organize its programs. In addition, the joint NSF/EPA Technology for a Sustainable Environment (TSE) program has resulted in 347 articles, 25 book chapters, 6 patents, and one Nobel Prize for Chemistry from the first 64 TSE grants alone, he said. Finally, Dr. Gilman testified that EPA is implementing a new research framework that includes green chemistry and engineering. EPA is releasing solicitations in the area of "Collaborative Science and Technology Network for Sus-

tainability," and will be partnering with states, local governments, and industry to address high-priority challenges.

Dr. Cue described green chemistry as a win-win for Pfizer's goal of achieving economic, environmental, and social sustainability. He stated that Pfizer has achieved tremendous gains in efficiency through application of green chemistry in the production of pharmaceuticals. Pfizer has seen a five- to 10-fold decrease in the amount of waste produced per kilogram of pharmaceutical product (from 25 to 100 kg to 5 to 10 kg). He underscored that few students graduating with chemistry majors are trained in, or even exposed to green chemistry. Thus, Pfizer must invest a huge amount of energy to educate its scientists about the green chemistry principles and how they apply to daily R&D efforts, he said. Dr. Cue testified that H.R. 3970 would help overcome this lack of familiarity with green chemistry.

Mr. Bradfield testified that customer demand and profitability are the ultimate drivers of green chemistry adoption in industry, and that applying green chemistry processes in the carpet industry will keep U.S. jobs from going overseas. He also made recommendations for improving the federal green chemistry effort, including rewarding those that use green chemistry products and processes with tax credits. He also stated that the proposed Interagency Working Group should work closely with industry to establish R&D priorities.

Dr. Woodhouse stated that economic and professional inertia are the main barriers to adoption of green chemistry. For example, he said small price increases prevent industry from selling green chemistry products, and universities are not updating their chemistry curricula to reflect green chemistry. Dr. Woodhouse also agreed with Dr. Cue that much more needs to be done to train future generations of chemists and chemical engineers in green chemistry.

V. Committee Actions

On March 16, 2004, Mr. Gingrey introduced H.R. 3970, the Green Chemistry Research and Development Act of 2004, along with Ms. Johnson (TX) and Mr. Ehlers. The introduction was the culmination of almost five months of bipartisan staff briefings on the issue from agencies, industry, and other relevant groups. As is Committee practice with bills that cut across the jurisdiction of most of the Subcommittees, the bill was held at full Committee.

The Committee convened to receive testimony on the bill at a hearing on March 17, 2004.

On March 31, 2004, the Committee on Science met to consider H.R. 3970. After consideration of several amendments, the Committee recessed and resumed consideration on April 1, 2004. The Committee considered the following amendments to the bill:

1. Mr. Boehlert offered a technical amendment to stagger the date on which two biennial NSF reports are due. This amendment was adopted by a voice vote.

2. Mr. Gordon offered an amendment that would have established a program on green chemistry within NIST's Manufacturing Extension Program. Mr. Gingrey offered a substitute amendment that would instead explicitly list green chemistry activities as al-

lowable activities for Manufacturing Extension Partnership centers. Mr. Gingrey's substitute was adopted by a voice vote.

3. Mr. Gordon offered an amendment to require NSF to award grants to develop green chemistry curricula. Mr. Gingrey offered a substitute amendment. Both amendments were withdrawn.

4. Ms. Johnson offered an amendment to make clear that non-profits with experience in green chemistry were eligible to participate in activities under the Act. Mr. Gingrey offered a substitute amendment that removed the requirement that non-profits already have experience in green chemistry. Mr. Gingrey's substitute amendment was adopted by a voice vote.

5. Mr. Wu offered an amendment that would have established partnerships to retrain chemists and chemical engineers in green chemistry. Mr. Gingrey offered a substitute amendment that made such partnerships a program activity. Mr. Gingrey's substitute, as amended by unanimous consent, was adopted by a voice vote.

6. Mr. Gordon offered an amendment that would have mandated federal procurement of green chemistry products. The amendment was defeated by a rollcall vote (Y—14; N—19).

7. Ms. Johnson offered an amendment that would have required a National Research Council study on barriers to the successful commercialization of green chemistry. The amendment was defeated by a voice vote.

8. Ms. Johnson offered an amendment that would have increased the NSF authorization amounts. The amendment was defeated by a rollcall vote (Y—15; N—18).

9. Mr. Honda offered an amendment that would have provided for research on ethical, legal, environmental, and other appropriate societal concerns. The amendment was withdrawn.

10. Ms. Jackson-Lee offered an amendment that would have established a community green chemistry grant program. The amendment was defeated by a voice vote.

11. Ms. Jackson-Lee offered an amendment that would have deleted references to "sums otherwise authorized to be appropriated." The amendment was defeated by a voice vote.

12. Mr. Baird offered an amendment that would have added supporting efforts to fight invasive species to the list of program activities. The amendment was withdrawn.

13. Ms. Lofgren offered an amendment that would have required the development of a report listing substances of concern as high priority categories for replacement with green chemistry alternatives for homeland security purposes. The amendment was defeated by a rollcall vote (Y—15; N—15).

14. Ms. Jackson-Lee offered another amendment that would have deleted references to "sums otherwise authorized to be appropriated." The amendment was defeated by a rollcall vote (Y—16; N—19).

The legislation was agreed to by a voice vote. Mr. Gordon moved that the Committee favorably report the bill, H.R. 3970, as amended, to the House with the recommendation that the bill as amended do pass, and that the staff be instructed to make technical and conforming changes to the bill as amended and prepare the legislative report and that the Chairman take all necessary steps to bring the bill before the House for consideration. With a quorum present, the motion was agreed to by a voice vote.

VI. Summary of Major Provisions of the Bill

The major provisions of the legislation are:

• Establishes an interagency research and development (R&D) program to promote and coordinate federal green chemistry research, development, demonstration, education, and technology transfer activities.

• Establishes an interagency working group composed of representatives from the National Science Foundation (NSF), the National Institute for Standards and Technology (NIST), the Department of Energy (DOE), the Environmental Protection Agency (EPA), and any other agency that the President may designate, to oversee the planning, management, and coordination of all federal green chemistry R&D activities. Designates the Director of NSF and the Assistant Administrator for Research and Development at EPA as co-chairs.

• Requires the interagency working group to report to Congress within two years of enactment, summarizing federally-funded green chemistry research and development activities and progress made toward the goals and priorities of the program, as established by the working group.

• Amends the National Institute of Standards and Technology Act to make eligible as a Manufacturing Extension Program activity the enabling of supply chain manufacturers to conduct activities with the aim of reducing or eliminating the use or generation of hazardous substances.

• Authorizes appropriations from sums otherwise authorized to be appropriated for NSF, NIST, DOE and EPA. Total authorizations are $26 million in FY 05, $28 million in FY 06 and $30 million in FY 07.

VII. Section-by-Section Analysis

Sec. 1. Short Title

"Green Chemistry Research and Development Act of 2004".

Sec. 2. Definitions

Defines terms used in the text.

Sec. 3. Green Chemistry Research and Development Program

Establishes an interagency research and development (R&D) program to promote and coordinate federal green chemistry research, development, demonstration, education, and technology transfer activities. The program will provide sustained support for green chemistry R&D through merit-reviewed competitive grants to researchers, teams of researchers, and R&D partnerships of universities, industry, and nonprofit organizations, and through R&D conducted at federal laboratories.

The program will provide support for, and encouragement of, the application of green chemistry through encouragement of consideration of green chemistry in all federally funded chemical science and engineering R&D; examination of methods to create incentives for the use of green chemistry; promotion of the education and training of undergraduate and graduate students and professional chemists and chemical engineers in green chemistry; collection and dissemination of information on green chemistry R&D and tech-

nology transfer; and provision of venues for outreach and dissemination of green chemistry advances such as symposia, forums, conferences, and written materials.

Establishes an interagency working group composed of representatives from the National Science Foundation, the National Institute for Standards and Technology, the Department of Energy, the Environmental Protection Agency, and any other agency that the President may designate, to oversee the planning, management, and coordination of all federal green chemistry R&D activities. Names the Director of the National Science Foundation and the Assistant Administrator for R&D at the Environmental Protection Agency as co-chairs and requires the group to establish goals and priorities for the program and provide for interagency coordination, including budget coordination. Requires the group to submit a report to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate within two years of the enactment of this legislation that includes a summary of Federally funded green chemistry activities and an analysis of the progress made towards the goals and priorities established for the program, including recommendations for future program activities.

Sec. 4. Biennial Report

Changes the reporting requirement under the Science and Engineering Equal Opportunities Act to stagger the dates on which two biennial reports are due.

Sec. 5. Manufacturing Extension Center Green Suppliers Network Grant Program

Amends the National Institute of Standards and Technology Act to make eligible as a Manufacturing Extension Program activity the enabling of supply chain manufacturers to conduct activities with the aim of reducing or eliminating the use or generation of hazardous substances.

Sec. 6. Authorization of Appropriations

Authorizes appropriations for green chemistry R&D programs, from sums already authorized to be appropriated, for the National Science Foundation, the National Institute of Standards and Technology, the Department of Energy, and the Environmental Protection Agency.

[In millions of dollars]

Agency	FY05	FY06	FY07
NSF	$7	$7.5	$8
NIST	5	5.5	6
DOE	7	7.5	8
EPA	7	7.5	8
Total	26	28	30

VIII. Committee Views

Federal Green Chemistry Efforts

The Committee expects NSF, EPA, DOE and NIST to give more focused attention to green chemistry. That means running pro-

grams that are specifically targeted at funding green chemistry R&D, education, and technology transfer, not just funding such work as an afterthought or as a byproduct of other efforts, or if proposals related to green chemistry happen to be submitted by researchers.

The Committee also expects the agencies to do a better job of coordinating their efforts in green chemistry so that the Federal Government has a comprehensive effort in green chemistry that can meet industry's needs while drawing on the unique strengths and expertise of each agency.

The Committee expects that as part of its coordinating effort, the Interagency Working Group will submit a green chemistry budget to the Office of Management and Budget as part of the annual budget submission process. This should reflect an effort to think through what is specifically needed for green chemistry; it should not be a mere cobbling together of disparate budgets submitted by each agency.

The Committee expects that, as part of its coordination efforts, the Interagency Working Group will identify areas in which green chemistry could help achieve federal, as well as industry needs. Obvious areas include improving homeland security and the development of non-toxic chemicals to combat invasive species. Clear industry needs include the development of benign solvents or solventless processes for a range of chemical processes, and new materials for buildings, such as paints and carpets that have lower toxicity.

One way green chemistry R&D programs can help assure both relevance to, and adoption by industry is to fund university-industry partnerships, which may also include national laboratories and other non-profit institutions. Not all green chemistry R&D should be funded this way, but it should be an emphasis in the R&D programs. The Committee intends that all R&D grants awarded under this legislation be competitively awarded and merit reviewed.

Beyond operating more specific programs to fund green chemistry activities, the federal agencies should integrate green chemistry techniques in all of their chemistry and chemical engineering R&D activities. The Committee believes that, when soliciting and evaluating all chemistry and chemical engineering R&D grant proposals, the agencies should consider whether the application addresses the toxicity of the proposed chemical process and product.

The Committee considers education and outreach activities as essential parts of a comprehensive green chemistry effort. The Interagency Working Group should make sure that participating agencies are engaging in these activities, consistent with their overall missions. Education activities should include curriculum development and student support.

Outreach activities should include the creation of an easily accessible one-stop-shop for green chemistry information. Specifically, the Interagency Working Group may want to consider whether it would be useful to maintain a list of chemical products and processes that are benign so that a company looking for a green chemistry solution could have easy access to available green chemistry alternatives.

In carrying out its responsibilities, the Interagency Working Group should consult regularly with a wide range of researchers and end-users, especially private companies.

The Committee expects the Interagency Working Group to track federal expenditures on green chemistry. The Interagency Working Group should be able to provide the Congress with precise figures on how much is being sought for specific green chemistry activities in the President's annual budget request and with precise figures on how much was actually spent in a fiscal year.

The Committee also expects the Interagency Working Group to be able to provide Congress with a clear explanation of the goals and priorities of the green chemistry program, how each agency's activities are contributing to those goals, and how achievement of those goals is being evaluated. An important metric for the program should be whether new green chemistry products and processes are being developed and whether they are being adopted by industry.

Section 6. Authorization of Appropriations

It is the Committee's intent that the funds authorized in this Act be used for focused, explicit activities in green chemistry. Any other agency programs—current or future—that may advance green chemistry should be viewed as money over and above the amounts authorized in this Act.

For example, NSF reports that it is currently spending almost $24 million per year on R&D related to green chemistry and chemical engineering. However, little of this is for efforts actually targeted toward green chemistry in specific requests for proposals. It is the Committee's intent that NSF expend the funds authorized in this Act on explicit green chemistry activities. The Committee expects that doing so would have no adverse effect on existing chemistry programs that happen to have funded about $24 million on projects related to green chemistry. Those programs should continue. The Committee in no way intends this Act to reduce the total amount of money NSF spends on green chemistry.

Moreover, the Committee believes that all Federal chemistry and chemical engineering R&D programs should consciously strive to promote R&D that will result in an improved environment.

IX. Cost Estimate

A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 402 of the Congressional Budget Act of 1974 has been timely submitted to the Committee on Science prior to the filing of this report and is included in Section X of this report pursuant to House Rule XIII, clause 3(c)(3).

X. Congressional Budget Office Cost Estimate

U.S. Congress,
Congressional Budget Office,
Washington, DC, April 9, 2004.

Hon. Sherwood L. Boehlert,
Chairman, Committee on Science,
House of Representatives, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 3970, the Green Chemistry Research and Development Act of 2004.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Kathleen Gramp.

Sincerely,

Douglas Holtz-Eakin,
Director.

Enclosure.

H.R. 3970—Green Chemistry Research and Development Act of 2004

Summary: H.R. 3970 would authorize a total of $84 million in appropriations for fiscal years 2005 through 2007 for chemistry and chemical engineering research aimed at reducing or eliminating the use and production of hazardous substances (known as "green chemistry"). It would authorize funding for such green chemistry programs at four agencies: the National Science Foundation (NSF), the Department of Energy (DOE), the National Institute of Standards and Technology (NIST), and the Environmental Protection Agency (EPA). Under this bill, the amounts authorized would be derived from sums otherwise authorized to be appropriated.

Assuming appropriation of the specified amounts, CBO estimates that implementing H.R. 3970 would cost $83 million over the 2005–2009 period. CBO estimates that enacting this bill would have no effect on direct spending or revenues.

H.R. 3970 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments either as regulators or as owners and operators of chemical facilities.

Estimated cost to the Federal Government: The estimated budgetary impact of H.R. 3970 is shown in the following table. The costs of this legislation fall within budget functions 250 (general science, space, and technology), 300 (natural resources and environment), and 370 (commerce and housing credit).

	By fiscal year, in millions of dollars—					
	2004	2005	2006	2007	2008	2009
SPENDING SUBJECT TO APPROPRIATION						
Spending for Green Chemistry Research Under Current Law:						
Budget Authority [1]	35	0	0	0	0	0
Estimated Outlays	32	22	8	2	0	0
Proposed Changes:						
Authorization Level	0	26	28	30	0	0
Estimated Outlays	0	12	23	28	16	4
Spending Under H.R. 3970:						
Authorization Level [1]	35	26	28	30	0	0

	By fiscal year, in millions of dollars—					
	2004	2005	2006	2007	2008	2009
Estimated Outlays	32	34	31	30	16	4

[1] The 2004 level reflects agencies' estimates of the amounts appropriated for that year for activities similar to those authorized by H.R. 3970.

Basis of estimate: For this estimate, CBO assumes that the amounts authorized will be appropriated each year and that outlays will occur at rates similar to those of existing research and development programs. In 2004, NSF expects to spend $24 million for green chemistry research, EPA about $7 million, and NIST about $4 million. DOE currently does not conduct research specifically targeted to green chemistry technologies.

Intergovernmental and private-sector impact: H.R. 3970 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments either as regulators or as owners and operators of chemical facilities.

Estimate prepared by: Federal Costs: Kathleen Gramp. Impact on State, Local, and Tribal Governments: Gregory Waring. Impact on the Private Sector: Selena Caldera.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

XI. Compliance With Public Law 104–4 (Unfunded Mandates)

H.R. 3970 contains no unfunded mandates.

XII. Committee Oversight Findings and Recommendations

The Committee on Science's oversight findings and recommendations are reflected in the body of this report.

XIII. Statement on General Performance Goals and Objectives

Pursuant to rule XIII, clause 3(c)(4) of the House of Representatives the general performance goals and objectives of H.R. 3970 are to establish an interagency research and development (R&D) program to promote and coordinate federal green chemistry research, development, demonstration, education, and technology transfer activities.

XIV. Constitutional Authority Statement

Article I, section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 3970.

XV. Federal Advisory Committee Statement

H.R. 3970 does not establish nor authorize the establishment of any advisory committee.

XVI. Congressional Accountability Act

The Committee finds that H.R. 3970 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104–1).

XVII. Statement on Preemption of State, Local, or Tribal Law

This bill is not intended to preempt any State, local, or tribal law.

XVIII. Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

SECTION 37 OF THE SCIENCE AND ENGINEERING EQUAL OPPORTUNITIES ACT

BIENNIAL REPORT

SEC. 37. (a) [By January 30, 1982, and biennially thereafter] *By January 30 of each odd-numbered year*, the Director shall simultaneously transmit a report to the Congress, the Attorney General, the Director of the Office of Science and Technology Policy, the Chairman of the Equal Employment Opportunity Commission, the Director of the Office of Personnel Management, the Secretary of Labor, the Secretary of Education, and the Secretary of Health and Human Services.

* * * * * * *

SECTION 25 OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT

REGIONAL CENTERS FOR THE TRANSFER OF MANUFACTURING TECHNOLOGY

SEC. 25. (a) The Secretary, through the Director and, if appropriate, through other officials, shall provide assistance for the creation and support of Regional Centers for the Transfer of Manufacturing Technology (hereafter in this Act referred to as the "Centers"). Such centers shall be affiliated with any United States-based nonprofit institution or organization, or group thereof, that applies for and is awarded financial assistance under this section in accordance with the description published by the Secretary in the Federal Register under subsection (c)(2). Individual awards shall be decided on the basis of merit review. The objective of the Centers is to enhance productivity and technological performance in United States manufacturing through—

(1) * * *

* * * * * * *

(4) the active dissemination of scientific, engineering, technical, and management information about manufacturing to industrial firms, including small- and medium-sized manufacturing companies; [and]

(5) the utilization, when appropriate, of the expertise and capability that exists in Federal laboratories other than the Institute[.]*; and*

(6) the enabling of supply chain manufacturers to continuously improve products and processes, increase energy efficiency, identify cost-saving opportunities, and optimize resources and technologies with the aim of reducing or eliminating the use or generation of hazardous substances.

* * * * * * *

XIX. Committee Recommendations

On April 1, 2004 a quorum being present, the Committee on Science favorably reported H.R. 3970, Green Chemistry Research and Development Act of 2004 as amended, by a voice vote, and recommended its enactment.

XX. MINORITY VIEWS

I. Introduction

Pollution prevention achieved through the application of improved industrial processes and the use of safer materials is a worthy goal that everyone can support. Research and development (R&D) in green chemistry and engineering is the first step—a necessary but not sufficient step—to the realization of a cleaner, safer environment. Congress recognized the promise of this approach and made pollution prevention a focus of federal activity with the passage of the Pollution Prevention Act of 1990.

The introduction of H. R. 3970 provided an opportunity to improve federal pollution prevention efforts, private sector adoption of green chemistry and engineering processes, and progress toward cleaner and safer approaches to manufacturing. We applaud the introduction of this bill. Unfortunately, by severely limiting the bill's scope, the Committee has not seized the opportunity presented by the introduction of Rep. Gingrey's legislation.

Our concerns are more with what is not in the bill than with what is in the bill. H.R. 3970 as reported, simply does not go far enough to promote the adoption of green chemistry and engineering. Amendments we offered to build upon the framework of the introduced bill were rejected, or were modified in ways that severely limited guidance to federal agencies about the program's direction and intent. In the end, while the bill authorizes certain R&D activities, it does little or nothing to facilitate the application of R&D to real problems. By limiting itself to a very narrow focus, the Committee has failed to dent the many barriers that continue to preclude broader diffusion of green chemistry.

II. Abbreviated Process for Consideration of the Legislation and Failure To Utilize the Full Range of the Committee's Jurisdiction

In its consideration of H.R. 3970, the majority has consistently emphasized speed over content. In two weeks, H.R. 3970 went from introduction to markup by the full Committee. The bill received a single hearing on the day of introduction and was marked up by the Committee two weeks later. No subcommittee hearings or markups were held. This is in contrast to the deliberate procedure utilized recently for two bills of similar complexity—H. R. 766, the Nanotechnology R&D Act, and H.R. 3980, the Wind Storm Hazard Reduction Act. With H.R. 3970, the Majority appeared to have an over-riding interest in moving the bill to the Floor quickly.

More importantly, as a result of its breakneck pace, the majority adopted an excessively narrow interpretation of its jurisdiction relative to the amendments we offered to H.R. 3970. Amendments on procurement, homeland security, and the establishment of a community grant program were all rejected due to the majority's con-

cern that these additions would trigger referral to other Committees.

Representative Lofgren's amendment would have tied the green chemistry R&D agenda to homeland security needs through an EPA report developed in consultation with the Department of Homeland Security (DHS). The amendment mandated no regulatory action, nor did it require EPA or DHS to recommend regulatory action based on the findings of the report. Study and reporting requirements on a wide variety of topics have been included in much of the legislation acted upon by this Committee, and the Committee has jurisdiction over both EPA and DHS R&D programs. The majority's own report on this bill emphasizes the importance of green chemistry in reducing potential terrorist targets. Nonetheless, the majority took that unwarranted view that the Lofgren amendment would trigger debilitating referrals, or that such referrals (if they did occur) could not be worked out with other Committees.

Representative Jackson Lee's amendment would have established a grant program for community-based environmental and public health groups to obtain technical assistance required to participate in joint pollution prevention projects with local industrial facilities. The majority's report touts the benefits of such programs in its description of a Dow/NRDC partnership begun in 1996 and laments that more of these programs have not sprung up around the country. The Jackson Lee grants would have removed barriers to the development of more of these agreements by supporting voluntary and cooperative activities that have nothing to do with regulation. In the past the Committee has frequently taken an active role in creating technology transfer and targeted R&D programs to address important research gaps. By limiting its jurisdiction in the rejection of the Jackson Lee amendment, the Committee has taken a step backward in an area of research that has produced technology that is ready for demonstration and application.

We would have less concern over the rejection of these amendments if we were to be afforded an opportunity to offer these amendments during consideration by the House. We appreciate the majority's offer to work on a manager's amendment that may incorporate parts of the amendments that were rejected because of so-called jurisdictional concerns. However, from all indications, the Majority intends to bring this bill to the floor under suspension, a procedure that precludes minority Members from actually offering their amendments for an open vote.

We do not understand the majority's unwillingness to make the bill more comprehensive and effective, even if such expansion required the Committee to negotiate its jurisdiction with other Committees of the House. As the table below indicates, the Committee routinely works out jurisdictional concerns with other Committees of the House through a simple exchange of letters.

Table I

A. 108th Congress – Instances where the Science Committee allowed a bill reported by another committee to move forward despite Science's valid jurisdictional claim (exchange of letters).

DATE OF LETTER	BILL	PRIMARY COMMITTEE	SUBJECT
3/26/2004	H.R. 2584	Resources	Decommissioned NOAA ship to Utrok Atoll government
3/22/2004	H.R. 3966	Armed Services	ROTC and Military Recruiter Equal Access to Campus
3/12/2004	H.R. 2802	Small Business	Small Business Revitalization and Manufacturing Act
11/18/2003	H.R. 2584	Resources	Decommissioned NOAA ship to Utrok Atoll government
10/14/2003	H.R. 2696	Resources	Southwest Forest Health and Wildfire Prevention Act
6/26/2003	H.R. 2144	Transportation	Aviation Security
6/6/2003	H.R. 2115	Transportation	FAA Reauthorization
5/15/2003	H.R. 1588	Armed Services	Department of Defense Authorization

B. 108th Congress – Instances where another Committee allowed a bill reported by the Science Committee to move forward despite the other Committee's valid jurisdictional claim (exchange of letters)

DATE OF LETTER	BILL	SECONDARY COMMITTEE	SUBJECT
3/1/2004	H.R. 3752	Transportation	Commercial Space Launch Amendments
1/27/2004	H.R. 1085	Government Reform	NASA Flexibility Act (held at desk and cleared for Pres)
11/21/2003	S. 1152	Transportation	Fire Administration Reauthorization
8/7/2003	H.R. 2608	Resources	NEHRP Reauthorization (Earthquake)
7/24/2003	H.R. 1085	Government Reform	NASA Flexibility Act (House Floor consideration)

C. 108th Congress – Instances where the Science Committee and another committee reported the same bill which subsequently passed the House

H.R. 1297 (Columbia Orbiter Memorial Act) – Science reported 3/26/03; Veterans reported 4/3/03.

H.R. 1836 (Civil Service and National Security Personnel Improvement Act) – Government Reform Reported 5/7/03. Science, Ways and Means, and Armed Services discharged on 7/25/03.

III. Arbitrary Rejection of Substantive Improvements to the Legislation

H.R. 3970 directs the President to establish a Green Chemistry R&D Program to promote and coordinate Federal green chemistry research, development, demonstration, education, and technology transfer activities. Although the bill directs the President to establish a program that encompasses a full range of activities designed to go from basic research to application (see sections 3(b)(2)–3(b)(5)), the Committee did not include funding levels or specific programmatic direction that would enable this federal program to convert research into practice. Without specific Congressional direction, we believe that the Federal green chemistry will have little impact in removing the barriers that the majority details in its own report on the legislation.

During the Committee's March 17, 2004 hearing, witnesses identified a number of barriers to the adoption of green chemistry and engineering by manufacturing facilities. One of the strongest concerns was that too few chemists and chemical engineers encounter green chemistry concepts in their formal training. Dr. Cue, from Pfizer, noted: "today there are very few students graduating with chemistry majors who are trained in, or even exposed to, green chemistry". This factor becomes an important barrier to the adoption and use of green chemistry in industrial products and processes.

In response to this identified problem, Mr. Gordon unsuccessfully offered an amendment to fund competitive NSF grants at colleges and universities. The goal of these grants would be to incorporate green chemistry concepts and strategies through the revision of the undergraduate curriculum in chemistry and chemical engineering. As pointed out in the Committee's hearing by Prof. Woodhouse from Rensselaer Polytechnic Institute, there is a "professional inertia" in universities that is resistant to making curriculum changes. The NSF grants, including the requirement for cost sharing from awardees, would focus federal resources at those institutions that are serious about, and committed to, making curriculum revisions.

A related education amendment was offered by Mr. Wu to establish a program to create partnerships between companies in the chemical industry and colleges and universities to provide professional development training to practicing chemists and chemical engineers in the use of green chemistry concepts and strategies. The Wu amendment would get at the problem of too few practicing scientists and engineers with knowledge on how to apply green chemistry concepts. By forging close relationships between the academic and industry partners, the amendment would ensure that courses of study would be relevant to industry and would provide practicing chemists with the skills and knowledge needed to employ green chemistry concepts in their work. The majority agreed only to add to the list of authorized activities the possibility of support for retraining chemists and chemical engineers. The positive requirement of the Wu amendment to establish a program was not retained nor were any provisions regarding how the program would be implemented.

We offered four amendments designed to accelerate the movement of green chemistry from the laboratory bench into the manu-

facturing facility. While witnesses identified a number of promising green chemistry technologies and processes that have emerged through federal and private R&D efforts, most of these technologies have not been widely adopted by industry. The success of research and development in green chemistry and engineering cannot be measured solely in terms of published papers, patents awarded, and workshops held; the goal is the adoption and widespread use of green chemistry to reduce the use of toxic materials, to make workplaces and communities safer, and to avoid costly cleanups through pollution prevention.

Three of our four amendments were rejected, and the fourth was stripped of its funding authorization, thereby seriously undermining its potential impact.

By codifying the goal established under Executive Order 13101, Representative Gordon's amendment to increase the federal government's purchase of environmentally preferable products responded to the testimony of several witnesses. The amendment would do for the products of green chemistry what the 2002 Farm Bill did for bio-based products—namely, utilize procurement preferences to create a permanent guarantee of a federal market for desirable products.

Mr. Steven Bradfield of the Carpet and Rug Institute testified that: "We believe that rewarding those that commercialize green chemistry developments with research and development grants, tax incentives, and preferential federal purchasing programs will drive the desired advances in green chemistry." Representative Gordon's amendment would have provided a federal market to reward innovative companies. There can be no profit without a market. The federal government should support innovative firms investing in cleaner, safer technologies with a market for their products.

Representative Gordon also offered an amendment to ensure that green chemistry processes and products were available to small supply-chain manufacturers through NIST's Manufacturing Extension Partnership Program. In 2003, EPA initiated the Green Suppliers Network (GSN) Program in conjunction with the MEP program. The voluntary GSN program was established to encourage large manufacturers to work with their suppliers to adopt pollution prevention techniques. The amendment was based on the statements of several witnesses that industry's failure to use green chemistry products and processes more widely is less a research issue than an education problem. This amendment was specifically targeted at this problem.

Representative Gordon's amendment authorized the program with a modest funding level to enable the MEP centers to expand activities in this area. Representative Gingrey offered a substitute that eliminated all funding to implement the Green Supplier Network program. While the majority expressed support for the MEP Centers and this type of work, that support did not translate into actual funding for MEP. Although Mr. Gingrey noted that MEP funding was currently insufficient, his substitute amendment nonetheless increased MEP's responsibilities without providing the MEP program with the funding to carry out these added responsibilities.

Ms. Jackson Lee's amendment to establish a community grant program would have enabled community groups to engage in constructive, cooperative projects with local industrial facilities to identify pollution prevention opportunities. Too often interactions between facilities and the communities where they are located are combative rather than constructive. In 1996, the Natural Resources Defense Council (NRDC) and Dow Chemical signed an agreement to experiment with a different model. An important ingredient contributing to the success achieved at Dow's Midland, Michigan and La Porte, Texas facilities was the availability of technical assistance for the community groups participating in the program. The grants would only be awarded to communities that had identified a partner facility. This program would have helped to expand the options for identifying and implementing pollution prevention opportunities to make communities safer and cleaner.

The Lofgren amendment is consistent with the goals of the current joint grant program of NSF and EPA. According to the written testimony provided by Dr. Paul Gilman of EPA: "The goal of the Technology for a Sustainable Environment program is the discovery of innovative chemical alternatives with economic and environmental benefits through the design of inherently benign chemicals, materials, and energy for reduced risks, liabilities, accidents, and vulnerabilities."

A recent GAO report and examination of vulnerabilities associated with chemical manufacturing facilities included EPA estimates that 123 chemical facilities have toxic "worst-case" scenarios where more than 1 million people in the surrounding areas could be at risk of exposure if a release occurred. Representative Lofgren's amendment requiring EPA to produce a report identifying chemical substances of concern would form the basis for directing R&D efforts to the discovery of replacements for the most hazardous substances. The report would also have provided a list of hazardous chemicals for which substitutes are currently available, but not in widespread use. This amendment is consistent with the purposes of the bill and would target R&D to areas of greatest need. Contrary to the claims of the majority during the markup, it mandated no regulatory action by either EPA or DHS.

IV. Inadequate Resources Provided To Support the Authorized Program

In general, we believe that funding authorizations provided by the bill are insufficient to support the range of activities envisioned by the legislation. In the case of NSF, H.R. 3970's funding authorization for fiscal years 2005–2007 is significantly lower than the agency is currently providing for green chemistry activities. In the case of DOE and NIST, we cannot evaluate the sufficiency of funding levels in H.R. 3970 because the Committee was not provided information on the current funding for activities authorized by the bill.

H.R. 3970 purports to be an initiative to energize an interagency green chemistry R&D program. One might expect such an initiative to provide substantial new resources that will build on existing efforts, and in fact the Committee's March 16 press release touting the introduction of H.R. 3970 claimed that it would "increase Fed-

eral R&D into this science". Unfortunately, the bill does not comport with the press release.

As attested by the NSF Director in the March 17, 2004 hearing, the authorization of appropriations provided for NSF by H.R. 3970 is approximately 70 percent below the current level that the agency is expending on green chemistry research, as the term is defined in the bill. Ms. Johnson offered an amendment to increase the NSF authorization level in order to provide modest growth above the agency's estimate of current funding for green chemistry research. We do not understand either why the majority rejected this amendment or why they assert in the report that, despite the discrepancy between the bill's authorization levels and NSF's testimony, there is no intention to reduce current funding levels at NSF.

The authorization levels in the bill for EPA green chemistry R&D appear to be adequate, starting at the modest level the agency is currently expending, with 7 to 10 percent growth for the two outyears.

We do not believe the Committee has received sufficient information to provide guidance on the adequacy of funds that are authorized in the bill for green chemistry activities at DOE and NIST. These agencies did not testify at the March 17th hearing, nor did they supply written testimony or other material for the hearing record to indicate either the current level of expenditures for green chemistry and engineering or an estimate of additional funding they would need to participate in the federal program established under the bill.

The Committee report indicates the program will support R&D and demonstration projects at universities, industry and federal laboratories. The report also notes that some of the most significant barriers to the adoption of green chemistry are the lack of demonstrations and the costs associated with retooling of industrial infrastructure. DOE and NIST have experience in conducting cooperative projects and demonstration programs with industry. Input from these agencies regarding the likely cost of implementing this important component of technology transfer would have enabled the Committee to establish authorizations for these agencies that would ensure that these vital activities receive sufficient funding.

The resource levels provided for EPA, NIST, and DOE, coupled with the actual reduction that would result from the NSF authorization, signal a considerably less than robust R&D initiative in an area that a bipartisan majority of the Committee believes is of national importance.

A final problem with the authorization provisions in the bill is in the formulation that calls for the funds provided to come "from sums otherwise authorized to be appropriated." This formulation has meaning in the case of NSF, since the NSF Authorization Act of 2002 provides an overall funding authorization through FY 2007. The 2002 Act authorizes a generous agency funding level and allows the Foundation considerable flexibility in carrying out its research and education activities by giving direction for broad priority areas but by not specifying all of the activities that may be carried out under the Act. As a result, the formulation in H.R. 3970 that funds are authorized for green chemistry research "from sums otherwise authorized to be appropriated" is reasonable for NSF.

On the other hand, for the other three agencies explicitly provided with funding authority in the bill (DOE, NIST and EPA), there are no funding authorizations in statute and none in immediate prospect. As a result, congressional authorizing committees have provided no general framework that sets program priorities and associated resource allocations at these agencies. The effect of the "from sums" language in the bill is to specify a funding level available for each of the three agencies from whatever appropriations are provided for a fiscal year covered by the bill. This is the case because an agency's appropriation for a particular year covered by H.R. 3970 is the authorization for that year, absent an authorization act. The actual effect of this formulation is no different from providing a normal authorization ("There are authorized to be appropriated"). As pointed out in discussions during the markup on the bill, CBO would score the bill identically under either formulation.

This charade of attempting simultaneously to authorize funding for a program but not actually to specify any "new" money sidesteps the responsibility of the authorizing committee to state clearly its recommendations for the resource requirements necessary to implement a major activity it has authorized. We believe that the green chemistry R&D program is worthy of support and should be given an unequivocal authorization of appropriations at a level that is sufficient to effectively implement the initiative.

V. Conclusion

H.R. 3970 is not up to the quality of legislation that the Committee has produced in the past. The Committee should have taken more time to increase and target Federal efforts in an area that has great potential to improve the economy and the environment. It should not have shied away from making the bill effective because it feared facing routine jurisdictional conflicts of the sort that we deal with every day in this institution. There is no logic in authorizing R&D without facilitating the application of its results to real problems. While we do not strongly oppose this bill, our support for it in its present state is not enthusiastic.

BART GORDON.
JERRY F. COSTELLO.
EDDIE BERNICE JOHNSON.
LYNN C. WOOLSEY.
NICK LAMPSON.
JOHN B. LARSON.
MARK UDALL.
DAVID WU.
MICHAEL M. HONDA.
BRAD MILLER.
LINCOLN DAVIS.
SHEILA JACKSON LEE.
ZOE LOFGREN.
BRAD SHERMAN.
BRIAN BAIRD.
DENNIS MOORE.
ANTHONY D. WEINER.
JIM MATHESON.
DENNIS CARDOZA.

XXI. PROCEEDINGS OF THE FULL COMMITTEE MARKUP ON H.R. 3970, GREEN CHEMISTRY RESEARCH AND DEVELOPMENT ACT OF 2004

WEDNESDAY, MARCH 31, 2004

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC.

The Committee met, pursuant to call, at 10:08 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Sherwood L. Boehlert [Chairman of the Committee] presiding.

Chairman BOEHLERT. I want to welcome everyone here this morning. As usual, we are moving forward with bills that are bipartisan. All right. Before I get to my more official statement, as those of you know, the Committee on Science meets today to consider the following measures. H.R. 3980, the *National Windstorm Impact Reduction Act of 2004,* H.R. 4030, *Congressional Medal for Outstanding Contributions in Math and Science Education of 2004,* and H.R. 3970, the *Green Chemistry Research and Development Act of 2004,* and in consultation with Mr. Gordon, we agree that is the order we are going to proceed. The first two should go relatively easily. We will have a little more discussion on the Green Chemistry Bill, and we hope by then to have more Members in attendance.

I ask unanimous consent for the authority to recess the Committee at any point, and without objection, so ordered.

We will now proceed with the opening statements, and as I said before I so rudely interrupted myself, welcome. As usual, we are moving forward with bills that are bipartisan and moderate. Bills that will help make a difference in people's lives in very real ways. I am especially pleased that two of the bills were introduced by freshmen Members, Dr. Gingrey and Mr. Neugebauer. We hope that all of these bills will be able to move through the House before the May recess, although the Wind Bill, because it has a referral to another Committee, may be a little bit longer. As is our practice, I am going to talk about the bills now and let the sponsors describe them in greater detail when we get to the markup of each bill.

I want to congratulate Mr. Neugebauer and Mr. Moore for coming up with an affordable, targeted version of this Wind Bill. Windstorms cause much loss of life and property. We need a program for wind like the one we have for earthquakes that targets federal R&D resources toward developing better ways for buildings to better withstand windstorms. That is exactly what this bill will create.

I want to congratulate Chairman Smith and Ms. Johnson on their bill to create an award for businesses that help our nation's schools. This is clearly an activity we want to see increase, and this award will provide an additional incentive. The bill was inspired in part by the very successful Baldrige Award Program, which as we all know, emanated from this committee.

I want to take most of my time this morning to talk about Dr. Gingrey's Green Chemistry Bill because that is what this morning's debate will focus on. First let me say that this bill is exactly the kind of thing this committee should be doing; making sure that federal R&D programs give enough attention to important research that could advance national needs. The Federal Government has long had a smattering of Green Chemistry Programs, and even the Presidential Award, but we have lacked a sustained focused priority effort in this important area. This bill is designed to change that. The bill has attracted a surprisingly large number of amendments. I take that as a sign that we have hit on an important issue, one that has been previously neglected. So the amendments in that sense are a good sign.

Unfortunately, we are going to have to oppose these amendments in their current form. Let me emphasize that. In their current form, even though I always try to be open to other ideas and to look for grounds for compromise. We may reach some compromises this morning, and we will be offering substitutes for some amendments so that we can get at least some of the ideas behind them into the bill.

So what is wrong with the amendments? Well, the amendments fall into three categories. Several aim to increase spending in this bill. While I am sympathetic to the need to spend more in this program, we have a fiscal crisis, and both sound policy and sound politics dictate that we not make the program more expensive, particularly here and now. Hopefully, we will be able to spend more on green chemistry in later years.

The second category of amendment aims to elaborate on activities already explicitly or implicitly permitted in the bill. We don't want to weigh down the bill with very prescriptive program language, but we are willing to go somewhat farther than the introduced bill does in describing what kinds of activities might be funded through the Green Chemistry Program. I hope we can reach some agreement on these amendments.

The third category of amendment is the most problematic. These amendments would change the nature of this bill from one focused on R&D, and that is where I think we need the focus, to one that is more regulatory in nature. This bill's purpose is straightforward and non-controversial. We are trying to create an R&D program that will generate new ideas. If we add regulatory or procurement provisions, this bill will become controversial and will be referred to other committees, and we will have nothing to show for our efforts. I am sympathetic to some of these ideas, but this bill is not the proper vehicle to carry them forward.

If prompted by this bill, Members are now interested in taking other actions related to green chemistry, and I hope they will be, then they should introduce their own bills and we can decide how to proceed on them. But we shouldn't be turning an R&D bill into

a complex and controversial procurement and regulatory measure. That is contrary to our original basic purpose, to focus on research and development. So I hope we can have a collegial and productive markup today. I don't think there is any controversy on the underlying bills. I am pleased that the Members want to expand these bills further, but we can't expand so much that they won't fit into the House schedule. And when all is said and done, we have got to be more than just a debating society for ideas. We have got to be a Committee that generates good ideas that earn the support of our colleagues that get passed by the House, get passed by the Senate, and get signed into law by the President.

I now recognize Mr. Gordon for his opening statement.

[The prepared statement of Chairman Boehlert follows:]

PREPARED STATEMENT OF CHAIRMAN SHERWOOD BOEHLERT

MARCH 31, 2004

I want to welcome everyone here for our markup this morning. As usual, we are moving forward with bills that are bipartisan and moderate—bills that will help make a difference in people's lives in very real ways. I'm especially pleased that two of the bills were introduced by freshman Members—Dr. Gingrey and Mr. Neugebauer. We hope that all of these bills will be able to move through the House before the May recess, although the wind bill must go to another committee.

As is our practice, I'm going to talk about the bills now and let the sponsors describe them in greater detail when we get to the markup of each bill.

I want to congratulate Mr. Neugebauer and Mr. Moore for coming up with an affordable, targeted version of this wind bill. Windstorms cause much avoidable loss of life and property. We need a program for wind, like the one we have for earthquakes, that targets federal R&D resources toward developing ways for buildings to better withstand windstorms. That's exactly what this bill will create.

I want to congratulate Chairman Smith and Ms. Johnson on their bill to create an award for businesses that help our nation's schools. This is clearly an activity we want to see increase, and this award will provide an additional incentive. The bill is inspired in part by the very successful Baldrige Award program that this committee created.

I want to take most of my time this morning to talk about Dr. Gingrey's green chemistry bill because that's what this morning's debates will center on.

First let me say that this bill is exactly the kind of thing this committee should be doing—making sure that federal R&D programs give enough attention to important research that could advance national needs. The Federal Government has long had a smattering of green chemistry programs and even a Presidential award, but we've lacked a sustained, focused and priority effort in this important area. This bill is designed to change that.

The bill has attracted a surprisingly large number of amendments. I take that as a sign that we have hit on an important issue—one that has been previously neglected. So the amendments, in that sense, are a good sign.

Unfortunately, we are going to have to oppose these amendments in their current form, even though I always try to be open to others' ideas and to look for grounds for compromise. We may yet reach some compromises this morning, and we will be offering substitutes for some amendments so that we can get at least some of the ideas behind them into the bill.

So what's wrong with the amendments? Well, the amendments fall into three categories. Several aim to increase the spending in this bill. While I'm sympathetic to the need to spend more on this program, we have a fiscal crisis, and both sound policy and sound politics dictate that we not make the program more expensive. Hopefully, we will be able to spend more on green chemistry in later years.

The second category of amendment aims to elaborate on activities already explicitly or implicitly permitted in the bill.

We don't want to weigh the bill down with very prescriptive program language, but we are willing to go somewhat farther than the introduced bill does in describing what kinds of activities might be funded through the green chemistry program. I hope we can reach agreement on these amendments.

The third category of amendment is the most problematic; these amendments would change the nature of this bill from one focused on R&D to one that is more

regulatory in nature. This bill's purpose is straight-forward and non-controversial; we're trying to create an R&D program that will generate new ideas.

If we add regulatory or procurement provisions, this bill will become controversial and will be referred to other committees, and we will have nothing to show for our efforts. I'm sympathetic to some of these ideas, but this bill is not the proper vehicle for them.

If, prompted by this bill, Members are now interested in taking other actions related to green chemistry, then they should introduce their own bills and we can decide how to proceed on them. But we shouldn't be turning an R&D bill into a complex and controversial procurement and regulatory measure. If this bill doesn't pass, there will be fewer green chemistry ideas to get companies and the government to implement.

So I hope we can have a collegial and productive markup today. I don't think there is any controversy on the underlying bills. I'm pleased that Members want to expand these bills further, but we can't expand so much that they won't fit into the House schedule.

Mr. Gordon.

Mr. GORDON. Thank you, Mr. Chairman. We on the Democratic side are pleased that you have moved forward with these three bills for consideration today. The *National Windstorm Impact Reduction Act of 2004* is patterned after legislation written by Congressman Dennis Moore, the bill's chief sponsor. We all owe a debt of gratitude to Congressman Moore for identifying the need for a multi-agency Wind Hazard Reduction Program five and a half years ago. He worked to reach consensus among the agencies on the scope of such legislation. He founded the Wind Caucus to promote the program, and he worked with the private sector and the university community to make sure that the needs of those will carry out the work reflected in the bill's context or text.

Time is of the essence on this bill. Many of our districts have been impacted by major windstorms since Mr. Moore began this effort, and we are pleased that all of the major elements of the Moore—the log bill can be found in the new Neugebauer-Moore bill. Congressman Moore will go into greater detail on this point later in the markup. It is regrettable though that the proposed funding for the program had to be reduced so dramatically to perhaps a quarter of what we are spending on the problem of earthquake research. But the bill is still a positive start.

In contrast, the *Green Chemistry Research and Development Act of 2004* has not had such a lengthy period of maturation. It was introduced just 15 years ago—I mean 15 days ago, excuse me, and was the subject of a single hearing the following day. Our issue today is more than with what is not—is more what is not in the bill than what is in the bill. In other words, the bill is okay as a start, but it is not—does not go far enough to promote the adoption of green chemistry. Several Democratic Members on the Committee will offer amendments today in an effort to expand the impact and importance of the underlying legislation. Nearly all of these amendments are based on testimony given at our hearing by witnesses earlier this month. We hope the Chairman will be able to support many of these amendments, which we will offer in a constructive spirit.

The final bill today, H.R. 4030, is non-controversial. Congressman Smith has worked closely with Congresswoman Johnson in perfecting the bill. We all agree with the purpose of honoring private-sector organizations that make outstanding contributions to

strengthening science, mathematics, technology engineering education in our schools.

Chairman BOEHLERT. Without objection, all Members may place opening statements in the record at this point.

[The prepared statement by Mr. Davis follows:]

PREPARED STATEMENT OF REPRESENTATIVE LINCOLN DAVIS

I would like to start by thanking the Chair and Ranking Member for the opportunity to speak at today's markup.

There is bipartisan support among Members of the Science Committee for efforts to encourage green chemistry, or the development of materials and processes that are not harmful to people or the environment. Research and building construction at the Oak Ridge National Laboratory (ORNL) are shining examples of the good things that happen when green chemistry approaches are put into practice.

ORNL continues to contribute to a range of scientific and technological needs in green chemistry. New chemical approaches that use benign carbon dioxide (CO_2) instead of noxious industrial solvents have been deployed commercially in new, safer dry cleaning technologies. Researchers have also worked to develop methods that result in decreased use of materials that are harmful to the environment.

Even Oak Ridge buildings are getting "green." The environmentally friendly design off a new 370,000 square foot complex has netted ORNL a 2003 Excellence in Construction award from a major contractors association. Developing methods and products that are good for the environment is important. In the long run, it will save us untold sums in energy saved and damage deterred. I am proud that Oak Ridge is leading the way in green chemistry efforts and would encourage others to follow its example.

I thank our distinguished Chair and Ranking Member for the opportunity to speak this morning and yield back to the Chair.

[The prepared statement by Ms. Jackson Lee follows:]

PREPARED STATEMENT OF REPRESENTATIVE SHEILA JACKSON LEE

Mr. Chairman,

I rise in support of this bill that will encourage "green chemistry" and define the federal investment in that important subject. I commend my colleague from Georgia, Dr. Gingrey for authoring a bill that may help focus some of our attention on the need to encourage our schools, and labs, and industries to work toward protecting and preserving our environment. However, I wish that we had had more time to study the bill, to solicit opinions from our constituents and academics, and to work together to improve and enhance the bill. However, I think it is an important subject, so I feel if we work together today in the bipartisan spirit that the Science Committee is known for, we can send an excellent bill to the Floor of the House.

I assume that everyone in this room is "for" green chemistry. It only makes sense that if there are two ways to do something—a harmful way and a non-harmful way—we would all want to choose the non-harmful way. And assuming we agree that it is a responsibility of the Federal Government to stimulate research and investment in areas that could have a beneficial impact on our nation, I believe we would all agree that we should focus some of the Nation's research energies on green chemistry.

The main question is: how much of our resources should be allocated to program? This is an especially tough question in a budget environment like the one we have today. Massive tax cuts for the rich and a violent and expensive foreign policy have left us with little money left to fund critical programs.

The President's latest budget has slashed dozens of research and education programs. I have been very pleased with the bold leadership of the Chairman and Ranking Member of this Science Committee, pointing out that under-investing in science and technology is a grave error. It could jeopardize our position at the front of the world economy, and cost us jobs galore. I feel we need to find money to make investments in growth industries, and green chemistry certainly qualifies.

I am concerned, however, that the bill we are discussing, although well-intentioned, may not make the necessary improvement of investment in the field. Because the bill only draw from funds that have been previously authorized, existing programs will have to be cannibalized, or simply renamed to fit the "green chemistry" label. As important as green chemistry is, I would hate to see it come at the expense of programs at NIST or DOE that we have been fighting for years. Some

of the programs that are to be incorporated into the green chemistry initiative have not even been re-authorized in years, further confusing the matter of funding.

Again, I am a firm supporter of green chemistry. It holds great promise for allowing our economy and standard of living to grow, while protecting our environment. However, hope that we can work together to ensure that it is funded appropriately.

Also, I will be offering an amendment later that will encourage volunteer industry-community partnerships that will lead to reduced use and emission of toxic chemicals in the community, better relations between communities and their local industrial facilities, and cost savings for the facility. The amendment is modeled after programs that have proven successful in Michigan and Texas.

I hope you will support these amendments. Thank you.

Mr. SMITH OF MICHIGAN. Mr. Chairman, may I make a short comment?

Chairman BOEHLERT. You certainly may, Chairman Smith.

Mr. SMITH OF MICHIGAN. All of us here, in this committee especially, have been looking at how we improve math and science education, and maybe this is a small encouragement to have private sectors more involved—in the private sector in—by way of nonprofit organizations, by the way of business and industry to do something that is going to be in their long-term advantage, as well as the advantage of the United States to improve and increase the education in math and science and the number of students that are interested and can perform well.

This particular bill has no cost, but can be a stimulant to hopefully have more companies participate in working with schools and communities working with schools. And so I hope we can approve the amendment of the Chairman that allows us to do a technical change on alternating years for reports from the National Science Foundation.

Chairman BOEHLERT. Thank you very much for the intervention. Now here is what I would like to do, with the indulgence of all my colleagues. We have three bills before us, two of them I think there is almost unanimous agreement on. Let us dispense with them immediately, and then focus our time and attention on the Green Chemistry Bill, which has us all interested, and we are coming from different perspectives. Is that—do I see from a nod of the heads that that is a good plan? Let us go. All right.

Now onto—we will now consider the bill H.R. 3970, the *Green Chemistry Research and Development Act.* I now yield five minutes to Dr. Gingrey to introduce his bill.

Mr. GINGREY. Well, I would like to thank Chairman Boehlert and Mr. Gordon for bringing H.R. 3970, the *Green Chemistry Research and Development Act of 2004,* to markup today, and also I would like to thank the Chairman for allowing me to deliver, some pun intended, this bill to the Science Committee. I am excited about this bipartisan piece of legislation that helps plan, manage and coordinate Federal Green Chemistry Research and Development activities.

The emerging field of green chemistry holds many potential economic, environmental and national security benefits. We heard about some of them in the hearing we held a couple of weeks ago. However, we also realize that despite all of the promise and the potential of green chemistry, the Federal Government invests very little in this area. H.R. 3970 will establish a research and development program to promote and coordinate federal green chemistry research, development, demonstration, education and technology

transfer activities within the National Science Foundation, the Environmental Protection Agency, the National Institute of Standards and Technology, and the Department of Energy.

This legislation provides modest and prudent focus in an area that frankly deserves greater federal attention. The program established by the Green Chemistry Bill will provide sustained support for green chemistry research and development through merit reviewed competitive grants to researchers, university-industry partnerships and federal laboratories. In addition, this program will promote the education and the training of undergraduate and graduate students in green chemistry, and collect and disseminate information on green chemistry research and development and technology transfer. H.R. 3970 is fiscally prudent in these times of budgetary constraints by obtaining funding for this program from sums already authorized to be appropriated at the four agencies that I just mentioned.

This legislation has received broad support from the carpet industry, drug manufacturers, chemical firms and the American Chemistry Council, all of whom we heard from last week in our hearing. I look forward to the Committee positively reporting H.R. 3970 today and to its passage and enactment into law in the very near future.

Mr. Chairman, I thank you and I yield back the balance of my time.

[The prepared statement of Mr. Gingrey follows:]

PREPARED STATEMENT OF REPRESENTATIVE PHIL GINGREY

I'd like to thank Chairman Boehlert for bringing H.R. 3970, the *Green Chemistry Research and Development Act of 2004* to markup today. I'm excited about this bipartisan piece of legislation that helps plan, manage, and coordinate federal green chemistry research and development activities.

The emerging field of Green Chemistry holds many potential economic, environmental, and national security benefits. We heard about some of them in the hearing we held a couple weeks ago. However, we also realize that despite all of the promise and potential of green chemistry, the Federal Government invests very little in this area.

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H.R. 3970 is fiscally prudent in these times of budgetary constraints by obtaining funding for this program from sums already authorized to be appropriated at the four agencies I mentioned.

This legislation has received broad support from the carpet industry, drug manufacturers, chemical firms and the American Chemistry Council.

I look forward to the Committee positively reporting H.R. 3970 today and to its passage and enactment into law in the near future.

Thank you Mr. Chairman and I yield back my time.

Chairman BOEHLERT. Thank you very much. The Chair recognizes Mr. Gordon for five minutes to present his opening remarks.

Mr. GORDON. I yield to Ms. Johnson.

Ms. JOHNSON. Thank you very much, Mr. Gordon and Mr. Chairman. Frequently we as legislators preach about how we want to make this world a better place for those who are to follow. This Green Chemistry Act is a first step to increasing the use of renewable fuels, encourage manufacturing processes that generate less toxic waste, and promote the development of materials which can be easily recycled. I am so pleased that my colleague Congressman Gingrey has introduced the *Green Chemistry Research and Development Act of 2004,* and I am proud to be an original co-sponsor of this legislation.

Green Chemistry is the utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products. Over the past decade, there has been increasing interest in a fundamentally new approach to environmental protection. In studying green chemistry, we realize that science and technology can help produce processes and products that are both more environmentally benign and economically attractive. Although there is more work that can be done to strengthen this legislation, it provides the right impetus to encourage the science and manufacturing communities to start in the right direction, not only because green chemistry can save them money now in the short-term, but because it can also save our planet in the long-term.

Thank you very much, Mr. Chairman.

Chairman BOEHLERT. Thank you very much.

I ask unanimous consent that the bill is considered as read and open to amendment at any point, and that the Members proceed with the amendments in the order of the roster. Without objection, so ordered.

[See Appendix for H.R. 3970.]

Chairman BOEHLERT. The first amendment on the roster is an amendment offered by the Chair. I have an amendment at the desk. The Clerk shall report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Mr. Boehlert.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

I yield myself such time as is necessary to discuss the amendment.

This is essentially the NSF amendment that we have done in the other two bills, and Mr. Gordon, you know that, and there is agreement on both sides. Is there any further discussion on the amendment? If not, the vote is on the amendment. All in favor, say aye. Opposed, no. The ayes have it, and the amendment is agreed to.

The next amendment on the roster is amendment number two, as offered by the gentleman from Tennessee, Mr. Gordon. Are you ready to proceed with the amendment? Which one is that? It's the amendment adding a new section four. Yeah.

Mr. GORDON. Mr. Chairman, this is a straightforward amendment. It establishes a small, competitive grant program to enable the manufacturing extension partnership centers to actively implement the green suppliers' network program in conjunction with EPA. Initiated in late 2002, the green suppliers' network allows EPA centers working with large manufacturers to actively engage all levels of their supply chain to prevent pollution. The goal of

these grants is to enable supply chain manufacturers to continuously improve products and processes with the aim of reducing or eliminating the use or generation of hazardous substances.

The GSN program allows the Environmental Protection Agency to leverage the national network with MEP centers to improve environmental and economic benefits to small supply chain manufacturers. The EPA amendment relies upon the MEP Center's technical expertise in contacts in the manufacturing community to implement the program. My amendment builds upon an existing program to ensure that the green chemistry concepts will be introduced and utilized within the manufacturing supply chain of smaller manufacturers also, and I urge the adoption of the amendment.

Chairman BOEHLERT. Thank you very much, and is there any discussion?

Mr. UDALL. Mr. Chairman?

Chairman BOEHLERT. Yes? Who——

Mr. UDALL. I——

Chairman BOEHLERT. Mr. Udall.

Mr. GORDON. I'd move to strike the last word.

Chairman BOEHLERT. Your gentleman is recognized for five minutes.

Mr. UDALL. Thank you, Mr. Chairman. I will be much briefer than five minutes. I just want to make a general observation about the Committee's actions today in relation to the National Institute of Standards and Technology. I have to—I am concerned that we have gotten into the habit of authorizing NIST by subject rather than by developing a comprehensive budget that balances and prioritizes all of NIST's many missions. We have authorized NIST activities in nanotechnology and computer security, and today, we are authorizing NIST activities in wind hazard research and green chemistry.

We continue to give NIST new instructions to establish new programs without providing any overall budget increase. The result is that NIST makes the hard choices of what to cut in order to meet the Science Committee priorities. I don't believe we are doing our job as authorizers. NIST's budget has been increasingly under siege, and yet we have not moved a complete NIST authorization bill that would force us to make some hard choices on NIST funding priorities. While I support the objectives of the bills we are considering today, I think it is time that we move a comprehensive NIST authorization bill that fully funds NIST so that it can fully carry out its mission.

Mr. Chairman, I would yield back any time I have remaining, but I think it is——

Chairman BOEHLERT. Thank you, Mr. Udall.

Mr. UDALL. This is an important——

Chairman BOEHLERT. We appreciate it, and like you, I am a big fan of NIST and it warms my heart to see the 2005 budget request, which is about a 25 percent increase for NIST, and that is much needed. We have got some problems in 2004, and you know they are facing some lay-offs, and we are working with them in trying to see what we can do to help and I am pleased to report there are some other agencies that are providing some assistance. But there is a financial crunch this year, but next year a good sized increase,

except no increase for MEP. I think the Administration is wrong. I know the gentleman does. The Ranking Member does. I think everybody in this committee does, and so that is one of the reasons why you are going to see some of the reaction from our side as we try to add authorizing language in terms of more dollars.

Are there any amendments to the amendment? Doctor——

Mr. GINGREY. Mr. Chairman——

Chairman BOEHLERT.—Gingrey.

Mr. GINGREY. Mr. Chairman, I'd like to offer a substitute amendment to the Ranking Member's amendment. I have an amendment at the desk, Mr. Chairman.

Chairman BOEHLERT. The Clerk shall distribute the amendment. The Clerk shall report the substitute amendment, as it is being distributed.

The CLERK. Amendment two, H.R. 3970 offered by Mr. Gingrey.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered. Dr. Gingrey is recognized for five minutes to explain his substitute amendment.

Mr. GINGREY. Mr. Chairman, thank you. Again, this idea by Mr. Gordon is very good in concept. However, the manufacturing extension partnership is already financially burdened, and we do not want to add additional mandates. This amendment also adds additional money to the bill. This bill is funded modestly and the hope is to get a small program going that could grow in the future. I do not want to add new money to the program. I have a substitute amendment to the gentleman's amendment, and my amendment would make as an eligible MEP activity enabling of supply chain manufacturers to continuously improve products and processes, increase energy efficiency, identify cost-saving opportunities and optimize resources and technologies with the aim of reducing or eliminating the use of our generation of hazardous substances.

So I think that this is a prudent amendment that addresses the gentleman's concerns that MEP play an important role in promoting green chemistry; however, without being overly prescriptive or adding additional money to the bill, and I yield back——

Chairman BOEHLERT. And thanks——

Mr. GINGREY.—Mr. Chairman.

Chairman BOEHLERT.—for that explanation, and I agree with the gentleman's reasoning, and once again, let me stress that there is no one in this committee or this Congress that is a greater fan of the manufacturing extension partnership than the Chair. I know a number of my colleagues equal me in their passion for the program. It is mind-boggling to think in terms of such an outstanding program getting short shrift from my Administration, and I am working with them to try to convince them of the error of their ways. But the reasoning given by Dr. Gingrey in his very eloquent, eloquent explanation of his substitute amendment is something that I embrace, and I thank him for that and I wonder if there is any further discussion on the amendment to the amendment.

Chair recognizes Mr. Gordon.

Mr. GORDON. Thank you, Mr. Chairman. I agree that the gentleman's argument was eloquent, but it was arguing for my amendment. He said that we should not place additional restriction—or additional burdens on the MEP program, and—without funding

them. Well, my amendment provides $5 million to fund the program, a program that we already all agree is under-funded. Now what his amendment does is require them to do the same thing basically that I have done, but gives them no funding. So he was eloquent, but his eloquence was arguing for my amendment. So if we are going to give them those responsibilities, let us authorize an additional $5 million to accomplish it.

Chairman BOEHLERT. Thank you very much. Is there any further discussion on the substitute amendment? Being no one seeking recognition, the vote is on the amendment—the substitute amendment. All in favor, say aye. Opposed, no. The ayes appear to have it. The ayes have it. Let us see. The ayes have it, and the substitute amendment is agreed to.

Now the vote occurs on the base amendment. We have got a substitute, we don't—oh, the substitute? Okay. All right. Just—all right. Got it. We will move on to the next one.

The next amendment that is on the record is amendment number three, an amendment offered by the gentleman from Tennessee, Mr. Gordon. Mr. Gordon, you are recognized.

Mr. GORDON. I have an amendment at the desk.

Chairman BOEHLERT. And the Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Mr. Gordon.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered. The gentleman from Tennessee is recognized for such time as he may consume.

Mr. GORDON. My amendment, Mr. Chairman, establishes a program in the National Science Foundation to fund competitive grants at colleges and universities to incorporate green chemistry concepts and strategies through the revision of the undergraduate curriculum in chemistry and chemical engineering. One of the serious impediments to gaining acceptance and widespread commercialization of products and processes consistent with green chemistry concepts is that students majoring in chemistry and chemical engineering are not exposed to green chemistry in their studies. This fact was pointed out by witnesses during the Committee's recent hearing on the bill.

Dr. Cue from the—from Pfizer and I—said, and I quote, "Today, there are very few students graduating with chemistry majors who are trained in or even exposed to green chemistry." Similarly, Professor Woodhouse remarked that the professional inertia in universities is resisting making these types of curriculum changes. The amendment I am offering seeks to overcome this professional inertia and address the lack of graduates with training in green chemistry by using the prestige of the National Science Foundation grant to spur necessary curriculum and course revisions needed to bring in green chemistry. The grants will provide the incentive for faculty to invest the considerable time and effort needed to bring about comprehensive curriculum revisions.

The funding authorized is at a high enough level, $15 million per year, to get the attention of a reasonable number of universities. In addition, the institutions are eligible for grants only if they offer cost-sharing in an amount equal to the federal award. This provision will focus the federal resources at those institutions that are serious about and committed to making curriculum revisions. I

would note that the funding authorization—authorized for this program does not come from any new money. Consistent with the main NSF authorization appropriation in section four, the funding is carved out of the amount already provided in the National Science Foundation by the five-year NSF authorization enacted in 2002.

I ask my colleagues for support of this amendment, and I yield back my time.

Chairman BOEHLERT. Are there any amendments to the amendment?

Mr. GINGREY. Mr. Chairman——

Chairman BOEHLERT. Dr. Gingrey.

Mr. GINGREY.—I have a substitute amendment to the gentleman's amendment——

Chairman BOEHLERT. The Member is recognized.

Mr. GINGREY. And I have——

Chairman BOEHLERT. All right. You have got the amendment at the desk?

Mr. GINGREY. I have an amendment at the——

Chairman BOEHLERT. The Clerk shall distribute——

Mr. GINGREY.—desk, yes.

Chairman BOEHLERT.—the amendment, and the Clerk shall report the substitute amendment.

The CLERK. Amendment to H.R. 3790 offered by Mr. Gingrey.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered. The gentleman is recognized for five minutes or less.

Mr. GINGREY. Thank you, Mr. Chairman. I will—I am sure it will be less. On Mr. Gordon's amendment on undergraduate education, I do think that curriculum development will be an important part of this interagency program. But this amendment adds significant new money, and I consider $15 million a year significant new money, to be—to a very small program. The current language in the bill is broad and it does allow any activity that expands educational opportunities. At this point with the program in its infancy, we do not want to be too prescriptive, but allow the agencies to determine the most critical activities, and I have a substitute amendment.

Mr. Chairman, my amendment would include Mr. Gordon's program for curricular development, but it would fund it out of the funds already in the bill, without adding an additional line item of $15 million per year, and also it would remove some of the more detailed language in the gentleman's amendment, so I offer this substitute amendment and I yield back the balance of my time.

Chairman BOEHLERT. Thank you, and it will not surprise you to learn that Mr. Gordon would like to respond.

Mr. GORDON. Mr. Chairman, I don't mean to be ugly here, but once again, Mr. Gingrey has introduced my amendment. My amendment does not provide any additional funds. My amendment says use the—use $15 million already in the NSF budget, and let me say, this $15 million comes from a one and a half billion dollar amount in the NSF budget that is above the authorization. So I think they have a cushion there, so if you really want to implement this program, we need to put the incentives for the universities to

change those curriculum. And again, what this will do is you can't be eligible for these grants unless you agree as an institution to put up the same amount of your own money.

So again, let me—again, I—maybe we are just talking beyond each other, but what you are suggesting is what I have—what my amendment says, is to take the money out of existing funds, out of the one and a half billion dollars above their authorization.

Mr. GINGREY. If the gentleman——

Chairman BOEHLERT. Thank you very much.

Mr. GORDON. I will yield.

Chairman BOEHLERT. Dr. Gingrey.

Mr. GINGREY. Mr. Chairman, the gentleman is right in what he just said in regard to no additional funding, and I apologize. I was in error in stating that it would be $15 million a year in additional money, so the gentleman is right about that point. But I still would object to his amendment and again offer to the Committee my substitute in that the language in his amendment is very prescriptive and it is very detailed language, and it—we just feel that it would make it a little more difficult to proceed with this program at this time, so I yield back——

Mr. GORDON. Would the gentleman yield for one quick question?

Mr. GINGREY. Yes. I will be glad to.

Mr. GORDON. Okay. Does your amendment take out the cost-sharing provision for universities?

Mr. GINGREY. Yes, it does. It does.

Mr. GORDON. So we are not going to make them have a stake in this?

Mr. GINGREY. Well——

Mr. GORDON. We will make blood from a stone? So we are going to make the federal taxpayers to pick up the full bill here with this curriculum change?

Chairman BOEHLERT. Counsel, help us out on this thing. Sort of explain the reasoning.

The COUNSEL. I will try my best. The amendment does take out the cost-sharing provision and the idea here is that we are not opposed to cost-sharing, but the NSF, and I can be corrected if I am wrong by counsel up there, has a lot of trouble determining what the cost share is when it is in-kind cost sharing and——

Mr. GORDON. Chairman, if I could—might suggest, I think part of the problem is we only had one hearing on this bill. We really—and the bill hasn't been well vetted. It is a very—it is a good concept. We need to move forward with it. I think our misunderstandings really are a lack of communication. What I would suggest—you know, you have the votes here to do what you wish, but I would assume you want to get a good bill, and we can continue with these discussions and there can be a—potentially a manager's amendment or something at another time because surely, you know, this amendment does not—or substitute you do not want to—to your other incentives——

Chairman BOEHLERT. Yeah. And you know, I like your basic approach, and here is what I would like to do, and my word is my bond and I think my word is pretty good around here. I would like to move ahead and get this bill reported out, and then I would like to work with each element personally one on one, as well as our

respective very able professional staff members, to come to some agreement so that when we bring it to the Floor, we can have a manager's amendment that hopefully, we can agree on.

But it is certainly important that we operate from the same set of facts, and I thank Dr. Gingrey for the correction and he was mislead, and quite frankly, I was misinformed on this in terms of new money or money within the existing program. So it would be my intention to move forward and you are right. We do have the votes. We have worked long and hard on this thing. There are a few remaining questions, but we can get those questions resolved I think in—as we deal with the manager's amendment. The Chief of Staff of the Committee, Mr. Goldston, is recognized.

Mr. GOLDSTON. Mr. Chairman, it is easier to tell people to put the microphone on. I just want to clarify one thing. The issue on the cost sharing is as described. The other issue with the amendment was that there is an authorization for appropriations for federal funding in it, which would be about $15 million a year, and that was part of the controversy, so that the amendment has additional—the amendment as originally offered has additional authorizations for——

Chairman BOEHLERT. But I am really—I am hearing from the background here, the box seats, the luxury seats, if you will, that there is some question about it. So——

Mr. GORDON. We were very specific in that these funds would come out of the existing funds. Again, this is sort of a rush make haste. It is a good concept, a good bill. We just—you know, one hearing and not enough communication doesn't get a good bill to the Floor properly, and let us just continue the process. Again, I am—there is good faith on all sides. We want to have a good bill here. These are just—were some misunderstandings.

Chairman BOEHLERT. Well, a misunderstanding on one segment of an otherwise very good bill with outstanding intentions and most worthy objectives that unite rather than divide us. So we will proceed in the matter that I have just recommended, and one of the reasons we will do it is because I am sitting in the chair and I have got the votes.

But I don't want to ram anything through, and I know from my conversations with my colleagues on both sides and with the conversation with the staffs that we all embrace this concept of green chemistry. We all want to advance it. We all want to have something worthy come out of this committee, and I think we are about to have something worthy come out of the Committee with a footnote, and the footnote will say we are going to have some further discussions to tweak it a little bit so that when we bring the bill to the Floor, we can have a manager's amendment that will absolutely clarify anything that might be a little bit murky right now.

Mr. GORDON. Mr. Chairman, with that, I will be happy to withdraw my amendment, and I am sure that we can work together and make this bill a better bill.

Chairman BOEHLERT. Thank you, sir, very much. That is the type of cooperation that this committee has a reputation for and we got it the old-fashioned way. We have earned it by working together, and I would point out that time after time, we are leading this Congress with the nanotechnology initiative, with the cyber se-

curity initiative, with the creation of Under Secretary for Research and Science and Technology and new Homeland Security Department. We have work that we can be proud of and we want this product that we can also be proud of.

So without objection, Mr. Gordon's amendment is withdrawn.

Mr. GINGREY. Mr. Chairman——

Chairman BOEHLERT. Dr. Gingrey.

Mr. GINGREY.—could I ask unanimous consent to withdraw the substitute amendment as well?

Chairman BOEHLERT. Without objection, the substitute amendment is withdrawn.

We will now proceed to amendment number 13, out of courtesy to our distinguished colleague from the great northwest.

Mr. BAIRD. I thank the gentleman very much. I will offer this amendment and then withdraw it. Let me briefly——

Chairman BOEHLERT. Chair recognizes Mr. Baird.

Mr. BAIRD. Thank you.

Chairman BOEHLERT. Dr. Baird.

Mr. BAIRD. Thank you. Do we need to have the amendment introduced?

Chairman BOEHLERT. The Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Mr. Baird.

Chairman BOEHLERT. The gentleman is recognized for five minutes.

Mr. BAIRD. I thank the Chair and I know my colleagues Mr. Cardoza and Mr. Matheson want to speak. Very briefly, the second largest cause of habitat destruction in the United States today is invasive species. In the spirit of green chemistry, I think we have a real opportunity here to include in this legislation—I had thought about amending it, but I think we will perhaps withdraw the amendment and seek report language. But in recognition that consistent with the aims of green chemistry would be seeking to explore applications of various herbicides, pesticides and other chemical interventions to address invasive species.

In my own district, I have a wonderful pristine estuary that is being literally overtaken by spartina grass, which threatens to wipe out literally thousands of acres of habitat for migratory birds, salmon, crabs, oysters and other species. We are currently using an ineffective chemical to fight this. A more effective chemical, ten times more effective that is less damaging to the environment is not labeled for this application. If there is a way we can use some of these chemicals to fight these invasives, we have a win-win in that we produce less toxics to the environment and we battle the invasives more effectively, and I would like to see us try to address that in this legislation.

I yield one minute to my friend, Mr. Cardoza from California, who would like to speak to this.

Mr. CARDOZA. Thank you——

Chairman BOEHLERT. Yielded from Dr. Baird.

Mr. CARDOZA. Thank you, Mr. Chairman and thank you, Mr. Baird. I would just like to echo the remarks by my distinguished colleague and say that in California, we are threatened by a number of species—invasive species. Yellow star thistle. There is hyacinth in the rivers. There is a number of different species that

needs this kind of look at it and see if we can't find more efficacious means to eradicate the invasive species.

So I have been working with Congressman Pombo in the Resources Committee to look on some of these areas, and this legislation would greatly assist us in that effort, and I would encourage it to be included in the bill.

Mr. BAIRD. Yield a minute, if I have one remaining, to Mr. Matheson. If not, maybe he would strike the last word.

Chairman BOEHLERT. Gentleman is recognized.

Mr. MATHESON. Thank you, Mr. Baird, for offering the amendment. I think that every state probably has a story about invasive species and the problem, and in the west, in the Rocky Mountain west, we have a problem with the tamarisk, which is a huge consumer of water, and we live in an arid area and this is a serious problem for us. So I want to compliment you for raising this issue. I think green chemistry may offer one of the many solutions we need to find to the problem of invasive species, and I am pleased you offered this amendment.

I yield back the balance of my time.

Mr. BAIRD. I thank my colleagues and would ask the Chair—I'm willing—certainly would ask unanimous consent to withdraw, but I——

Chairman BOEHLERT. Without objection, so ordered.

Mr. BAIRD.—wonder if the Chair would be willing to join us in working in report language.

Chairman BOEHLERT. The Chair is always willing to join with its distinguished colleague from the northwest.

Mr. BAIRD. And that is what makes serving on this committee such a delight. I——

Chairman BOEHLERT. Thank you so much. Thank you.

Mr. BAIRD. Thank you very much.

Chairman BOEHLERT. The next amendment—back to the roster. Next amendment is amendment number four, an amendment offered by the gentlelady from Texas, Ms. Johnson. Ms. Johnson, are you ready to proceed?

Ms. JOHNSON. Yes. Mr. Chairman, I have an amendment at the desk.

Chairman BOEHLERT. Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Ms. Johnson.

Chairman BOEHLERT. I ask unanimous consent to dispense with the amendment—reading of the amendment. Without objection, so ordered.

Ms. Johnson is recognized for five minutes.

Ms. JOHNSON. This amendment would allow non-government organization, NGOs, to participate as partners in a collaborative effort on research and development. The NGOs, such as the Green Chemistry Council, will become eligible for awards under this amendment. In the past, NGOs have helped identify and work with businesses that are moving forward with sustainable development business activities, and the NGOs can play an important role in connecting companies to green chemistry resources at universities and federal research centers. And for this reason, NGOs should be included as an integral part of this legislation, and I urge my colleagues to support and adopt this amendment.

Thank you.

Mr. GINGREY. Mr. Chairman, I have a substitute amendment.

Chairman BOEHLERT.—number one, and then number two, report the amendment as it is being distributed.

The CLERK. Amendment to H.R. 3970 offered by Mr. Gingrey.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

Dr. Gingrey, you are recognized for five.

Mr. GINGREY. Mr. Chairman, thank you. I want to commend my colleague Ms. Johnson, the Ranking Member on the Subcommittee on Research, for her work on this important piece of legislation, and I do agree that adding nonprofits to the bill is a very good idea. But the requirement that entities demonstrate the green chemistry experience to get grants really runs counter to what this bill is aiming—or it aims at accomplishing.

We want to encourage universities and companies who have little, very little experience with green chemistry to begin incorporating green chemistry into their thinking. So therefore, my substitute to Ms. Johnson's amendment would include nonprofits in the program, but not include the requirement that entities demonstrate green chemistry experience, and I yield back, Mr. Chairman.

Chairman BOEHLERT. Thank you very much for that explanation, and I think it hits to one of the points—one of the principle points of this whole legislation, and let me point out that we are joined from—by some very distinguished presidents of various campuses of the State University of New York system. And I dare say most of them don't have faculty members or any experience factor in dealing with this concept of green chemistry.

So if we ask them as a requirement to compete for funding for these programs to cite all their experience, they are going to say, I think, we don't have this experience, but boy, we darn sure want to be involved with this area of research and we want to get into the program. So I think Ms. Johnson has a good idea, if we can—by adding nonprofits to the bill, but if we get out of the requirement that they have to demonstrate green chemistry experience, that runs counter to the basic purpose of the bill. We want to get more people into this relatively new area.

Ms. Johnson, is that something that is acceptable to you?

Ms. JOHNSON. It is acceptable, Mr. Chairman. I am sure he is going to rewrite the whole thing. Thank you.

Chairman BOEHLERT. Thank you very much, and Dr. Gingrey, the vote is on the amendment to the amendment. All in favor, say aye. Opposed, no. The ayes have it, and the substitute amendment is agreed to. Thank you very much, Ms. Johnson. Thank you very much, Dr. Gingrey.

Moving on with the roster, the next amendment on the roster—we are going to skip one and go to amendment number six from Mr. Gordon. Are you ready?

Mr. GORDON. I have an amendment at the desk.

Chairman BOEHLERT. All right. The Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Mr. Gordon.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

The gentleman is recognized for five minutes.

Mr. GORDON. Mr. Chairman, this amendment adds a provision to establish a federal procurement program for the environmentally preferred products. During the hearing on H.R. 3970, we learned that the economic factors play a critical role in the adoption of green chemistry processes. Creation of markets for products that are made with fewer toxic chemicals provides a strong incentive for manufacturers to adopt green chemistry practices.

This amendment addresses one of the suggestions we received from our witnesses about how the Federal Government could spur the adoption of green chemistry; federal procurement based upon multiple criteria. This amendment is based upon two federal procurement programs currently in law. One for bio-based products adopted in the 2002 Farm Bill, and the recycled products procurement preference created in the Solid Waste Disposal Act. And I think it is also important to note that this is not a novel suggestion in that Executive Order 13101 already provides for procurement preferences for environmentally preferred products.

So this amendment would simply really establish a procurement preference in law rather than just by Executive Order. Who knows, our next president may not be as environmentally sensitive as President Bush, so it would seem that we should make this as law rather than Executive Order that could be taken away at a later time.

An environmentally preferable product is designed as a product that has a lesser or reduced adverse effect on human health and the environment, when compared with competing products that serve the same purpose. The Federal Government should set an example and provide the incentives for the federal marketplace to spur investments that make our Nation healthier from an environmental as well as an economic standpoint. The amendment includes flexibilities for agencies. If products are determined to be unreasonably expensive or not—do not meet specifications for use, agencies are not required to purchase them.

The amendment also establishes a voluntary program to authorize producers of environmentally preferred products to use the label "EPA certified environmentally preferred product." This type of labeling program permits firms to market the environmental benefits of their product in a manner that provides consumers confidence in the validity of the level—of the label. Direct fellow support of green chemistry through procurement preference program moves research into the marketplace. This has worked for recycled and bio-based products. We should now expand this portion to reward companies that are making our products and our Nation an environmental responsible fashion.

The bottom line, Mr. Chairman, is this. This really is a threshold issue. If we are going to get industry to make the long-term commitment in investment to produce these kinds of products, they have got to know there is going to be some certainty and that there is going to be a market for them. It is not going to cost the Federal Government more money because they are not required if it is unreasonable cost. So if we want to have a—just a press release today

about green energy or green products, then you should oppose this amendment.

If you want to do something, really want to do something and bring these types of products on the market, this is an imperative amendment, and I adopt its—I urge its adoption and yield back my time.

Chairman BOEHLERT. Thank you very much. This is an area where there is not much disagreement between the Ranking Member and the Chair. But let me tell you the reality of life on Capitol Hill in the year 2004. First of all, if we do this amendment, we are biting off a big chunk and we are guarantying not just controversy—and we can deal with controversy. We do it all the time. But we are guarantying sequential referral to other Committees, and we will never see the light of day.

Secondly, the reason the Chair will oppose the amendment, while I agree in concept with the basic thesis, because I think the government should practice what we preach and not just, you know, tell everybody us what to do and not do it ourselves. But this takes this bill, a modest bill, takes the focus off the intended purpose, the principle objective to promote more research and development and gets it over into another area.

So for that reason, I—the gentleman—the Chair feels constrained to support—to oppose the amendment and I would ask if any of my colleagues seek—if not. Yes, Mr. Gordon.

Mr. GORDON. Mr. Chairman, let me remind you that this committee on a variety of occasions has come forth with legislation that has been referred to other Committees, and many times, when there is a minor referral, as I think this would be, we work out a letter of agreement between the Committees so that it does not take additional time. Now again, let me remind you, the bill we talked about earlier, Mr. Moore's bill concerning wind, it was out there for five and a half years and it got a—and we had a better bill. I don't advocate that we wait five and a half years, but on this particular bill, we have only had one hearing and we have already seen how there has been problems with technical misunderstandings all in good faith because it hadn't had time to really work it out.

I can see no problem in taking a little more time, getting a good bill. The threat of a joint referral should not be a hindrance because it has not been a hindrance to this committee in the past. It just happens that I am on that committee of joint referral and I think that we will be able to work it out in a collegial manner.

Chairman BOEHLERT. Let me tell you something from a little history lesson. Last year, the professional staff, very professional staff, both sides of this committee spent an entire recess, spent months trying to negotiate a procurement section that we introduced from this committee in the Ag bill, and it was all for naught. It was contentious. It took up a disproportionate share of the time of the very able staff, time that could be more effectively utilized dealing with other matters, as this committee is known to do.

So it is——

Mr. GORDON. Mr. Chairman——

Chairman BOEHLERT.—not a slam-dunk. Who seeks recognition?

Mr. BARTLETT. Mr. Chairman——

Chairman BOEHLERT. Dr. Bartlett.

Mr. BARTLETT. Thank you very much. Mr. Chairman, I agree with both the Ranking Member and with you. I agree with the Ranking Member that this is something—and with you that this is something that the Congress ought to be doing. But I also agree that if this is a part of this bill, that this is going to be the focus of the bill. This is going to get all of the lightening strikes and it is going to kill the rest of the bill.

But what I would like to suggest, sir, is that I will be happy to work with whoever would like to work on this to draft a separate bill that asks the government to please do this. You are right. We should practice what we preach, and I have no problem with our Committee reporting this out, but I have a problem with attaching it to this bill because I think it would become the focus rather than the real focus, the intended focus of this bill. So I would like to see it as a separate bill that stands on its own with its own hearing and then vote it out and then see where it goes.

Chairman BOEHLERT. That is an offer I don't think any reasonable person can refuse, and——

Mr. GORDON. Well, you know, again we are all dealing in good faith and there is no effort to misrepresent anything here. We all want to get a good bill, but Mr. Chairman, you talked about how the Committee spent all the time working on the Agriculture Bill. It is a part of law now. They did spend a lot of time and it worked out and it is a part of that Agriculture Bill. And so I mean, it is the bio-based——

Chairman BOEHLERT. And——

Mr. GORDON. Yeah. And so, I mean, again, it shows that we can work these things out. Again, I—again, you—I know you are not trying to misrepresent it. It is just——

Chairman BOEHLERT. Yeah.

Mr. GORDON.—we need——

Chairman BOEHLERT. Let me point out——

Mr. GORDON.—to clarify it.

Chairman BOEHLERT. Let me point out that your other Committee, the minor committee, the other committee you serve on, is doing its level best in the energy bill to repeal this government to buy——

Mr. GORDON. Well, I guess the good work of our Committee and our staff——

Chairman BOEHLERT.—environmentally friendly——

Mr. GORDON.—prevails and it is a part of the bill now and the 2002 Ag Bill.

Chairman BOEHLERT. Dr. Bartlett, is your offer still open?

Mr. BARTLETT. Absolutely. I think that this is what we ought to be doing. I guess I have broke ranks with some of my conservative colleagues, but I think it is what we ought to be doing, and I know that we will get a lot of static on this. If this is a part of this bill, I think it will be the focus and bring this bill down, and I would like to not see this bill brought down, but I would like to see a separate hearing on Mr. Gordon's amendment and make it a separate bill and push it forward.

Chairman BOEHLERT. I would agree——

Mr. BARTLETT. If we have sequential referral, let us do the sequential referral to get the thing out there.

Chairman BOEHLERT. And not hold this one up.

Mr. BARTLETT. Yes.

Chairman BOEHLERT. Not hold up something that is good and——

Mr. BARTLETT. Well, they are both good. It is just that this would——

Chairman BOEHLERT. Yeah.

Mr. BARTLETT.—become—that this——

Chairman BOEHLERT. This is a——

Mr. BARTLETT.—amendment would become the focus of this bill.

Chairman BOEHLERT.—lightning rod. No question about. The focus of a bill that is designed to deal with research and development. Thank you very much. I will take you up on the offer, and we will see how many colleagues we can get from your side, Mr. Gordon, because we will try to move a separate bill. It does a good deal of sense. And incidentally—well, the earlier point, and I want to make sure everybody understands this. The earlier point whether or not this includes new money, both answers are right. One side said it doesn't. The other side says it does. So how can you get yes to both questions?

The answer is CBO scores new money. This is new money, the $15 million. That is what Counsel and staff advise us. I agree it is not new money, but CBO says it is, so we have got to deal with the reality of having to do with CBO, how they score it. So that is enough on that one. Let us go on. Any——

Mr. GORDON. If I could, just again, everything is in good faith here. I know that there is nobody trying to pull the wool over anybody's eyes. Mr. Chairman, on your $15 million question, going back to an earlier amendment, a change of language could take care of that. But Mr. Bartlett, I think in all good faith, you presenting an offer to try to come forth with an additional bill, the problem is that bill would be coming—have to come out of Commerce. It would not be authorized or would not—this committee would not have jurisdiction on that type of appropriation or procurement bill.

So again, it is—you know, you want to help and it is all in good faith, but we can't come forward because that would not be our jurisdiction, and——

Chairman BOEHLERT. Let me tell you, the creative geniuses, plural, behind me can work with the parliamentary and we can tailor the language in such a way as that I am virtually assured that we could get referral here, maybe dual referral. That is all right. We accept that. Thanks, Dr. Bartlett. The answer is yes. We take you up on your offer. We are going to work on it, and——

Mr. GORDON. Well, I am on the Commerce Committee, so if you need a co-sponsor, we will get you started over there. We will try to get Ralph to help us too.

Chairman BOEHLERT. Is there any further discussion? If not, the vote is on the Gordon amendment. All in favor, say aye. No? No's appear to have it, and the amendment is defeated.

Are there——

Mr. GORDON. Mr. Chairman, I hate to do this, but I think we need a roll call just so we can separate who is really for this and who is not.

Chairman BOEHLERT. All right. If the Clerk will call the roll.

The CLERK. Mr. Boehlert.

Chairman BOEHLERT. Aye—no.

The CLERK. Mr. Boehlert votes no.

Chairman BOEHLERT. It just shows how conflicted I am because I agree with the concept. The vote——

The CLERK. Mr. Hall.

[No response.]

The CLERK. Mr. Lamar Smith.

[No response.]

The CLERK. Mr. Weldon.

[No response.]

The CLERK. Mr. Rohrabacher.

Mr. ROHRABACHER. No.

The CLERK. Mr. Calvert.

[No response.]

The CLERK. Mr. Nick Smith.

Mr. SMITH OF MICHIGAN. I vote no.

The CLERK. Mr. Bartlett.

Mr. BARTLETT. No.

The CLERK. Mr. Ehlers.

[No response.]

The CLERK. Mr. Gutknecht.

Mr. GUTKNECHT. No.

The CLERK. Mr. Nethercutt.

[No response.]

The CLERK. Mr. Lucas.

Mr. LUCAS. No.

The CLERK. Ms. Biggert.

Ms. BIGGERT. No.

The CLERK. Mr. Gilchrest.

Mr. GILCHREST. No.

The CLERK. Mr. Akin.

Mr. AKIN. No.

The CLERK. Mr. Johnson.

Mr. JOHNSON. No.

The CLERK. Ms. Hart.

[No response.]

The CLERK. Mr. Forbes.

[No response.]

The CLERK. Mr. Gingrey.

Mr. GINGREY. No.

The CLERK. Mr. Bishop.

Mr. BISHOP. No.

The CLERK. Mr. Burgess.

Mr. BURGESS. No.

The CLERK. Mr. Bonner.

[No response.]

The CLERK. Mr. Feeney.

Mr. FEENEY. No.

The CLERK. Mr. Neugebauer.

Mr. NEUGEBAUER. No.
The CLERK. Mr. Gordon.
Mr. GORDON. Aye.
The CLERK. Mr. Costello.
Mr. COSTELLO. Aye.
The CLERK. Ms. Johnson.
Ms. JOHNSON. Aye.
The CLERK. Ms. Woolsey.
[No response.]
The CLERK. Mr. Lampson.
Mr. LARSON. Aye.
The CLERK. Mr. Larson.
[No response.]
The CLERK. Mr. Udall.
Mr. UDALL. Aye.
The CLERK. Mr. Wu.
Mr. WU. Aye.
The CLERK. Mr. Honda.
Mr. HONDA. Aye.
The CLERK. Mr. Miller.
Mr. MILLER. Aye.
The CLERK. Mr. Davis.
[No response.]
The CLERK. Ms. Jackson Lee.
[No response.]
The CLERK. Ms. Lofgren.
[No response.]
The CLERK. Mr. Sherman.
Mr. SHERMAN. I vote aye.
The CLERK. Mr. Baird.
[No response.]
The CLERK. Mr. Moore.
Mr. MOORE. Aye.
The CLERK. Mr. Weiner.
Mr. WEINER. Aye.
The CLERK. Mr. Matheson.
Mr. MATHESON. Aye.
The CLERK. Mr. Cardoza.
[No response.]
Mr. GORDON. The Clerk would note, we have one additional——
Ms. JACKSON LEE. Am I recorded?
Mr. GORDON. Ms. Jackson Lee came in.
Ms. JACKSON LEE. Am I recorded?
The CLERK. She is not recorded. Mr. Chairman——
Ms. JACKSON LEE. I vote aye.
The CLERK. Ms. Jackson Lee votes yes.
Chairman BOEHLERT. How is Mr. Calvert recorded?
The CLERK. Mr. Calvert is not recorded.
Mr. CALVERT. No.
Chairman BOEHLERT. How is Ms. Hart recorded?
The CLERK. Ms. Hart is not recorded.
Ms. HART. No.
Chairman BOEHLERT. The Clerk will report.
The CLERK. Mr. Chairman, yes 14, no 19.

Chairman BOEHLERT. And the amendment is defeated. Next amendment, amendment number five, an amendment offered by the gentleman from Oregon, Mr. Wu.

Mr. WU. Mr. Chairman, I have an amendment at the desk.

Chairman BOEHLERT. The Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Mr. Wu.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

The gentleman from Oregon is recognized for such time as he may consume.

Mr. WU. Thank you very much, Mr. Chairman. This amendment creates a program to encourage partnerships between companies doing chemistry and chemical engineering and partnerships with colleges and universities to provide existing professionals with development training to practice green chemistry. The motivation for the amendment is to address the problem, which was discussed by several witnesses in the Committee's recent hearing on the bill.

Too few professionals in the fields are—have experience with green chemistry, prior experience, or in their undergraduate or graduate training, and this lack of training becomes an important barrier to the adoption and use of green chemistry in industrial products and processes. And this partnership between colleges and universities and businesses and industries would train chemists who are in the industry to ramp up in their green chemistry practices and bring green chemistry on-line much faster than it otherwise would.

Specifically, the amendment creates a program to award grants to institutions of higher education to develop programs and curricular materials to retrain chemists and chemical engineers to be eligible for these merit-based competitive grants. Under the new program, a college or university must enter into a partnership with at least two private-sector companies in the chemical doing—currently doing chemistry. The partnership allows for multiple colleges and universities to participate in the partnerships, along with professional societies in the chemical and chemical engineering fields.

And I—Mr. Chairman, I urge adoption of the agreement—of the amendment and yield back the balance of my time.

Chairman BOEHLERT. Thank you very much, and I think you have got a good idea, but I note that Dr. Gingrey has——

Mr. GINGREY. Mr. Chairman——

Chairman BOEHLERT. Yes? Who seeks recognition?

Mr. GINGREY. Excuse me, Mr. Chairman. I have a substitute amendment.

Chairman BOEHLERT. Dr. Gingrey.

Mr. GINGREY. I have an amendment at the desk, Mr. Chairman.

Chairman BOEHLERT. The Clerk shall distribute the amendment, and while the amendment is being distributed, the Clerk shall report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Mr. Gingrey.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered. The gentleman from Georgia, Dr. Gingrey, is recognized.

Mr. GINGREY. Thank you, Mr. Chairman. On the Wu amendment on partnerships in green chemistry, providing training opportuni-

ties, professional—for professional chemists and chemical engineers is certainly a good idea. However, we can accomplish this more simply by adding education of professionals to the list of program activities. We do not need a lengthy new section, I don't think, on this topic. So have a substitute amendment, Mr. Chairman, that would do just that. It adds professional education to the list of allowed program activities.

I applaud Mr. Wu for his idea, but I think that this is the best way to include professional education in the bill. And at this point with—again with the program in its infancy, we don't want to be too prescriptive, but yet allow the agencies to determine the most critical activities. So I yield back, Mr. Chairman, and I would submit this substitute amendment.

Chairman BOEHLERT. Well, yes. So if I understand it correctly, you are in agreement. It is just you want to have the same objective, adding professional education to the list, but you are just saying you don't need more detailed language that is prescribed in the Wu amendment, but you want to list this as one of the activities——

Mr. GINGREY. That is——

Chairman BOEHLERT.—that——

Mr. GINGREY.—correct, Mr. Chairman. That is in essence my——

Chairman BOEHLERT. Mr. Wu, what say you on that one?

Mr. WU. Well, I want to point out, Mr. Chairman, that one of the objectives of the amendment as we originally wrote it was to include partnerships with private industry so that there could be more—the knowledge of practicing chemists and these businesses could be brought to bear. And I was wondering whether the gentleman from Texas would be willing to work with us to add part of that partnership concept to this—to the—what I understand to be a secondary amendment to——

Chairman BOEHLERT. Yes, the amendment——

Mr. GINGREY. Mr. Chairman——

Chairman BOEHLERT.—of the——

Mr. GINGREY. Yes, I——

Mr. WU. The gentleman from Georgia——

Mr. GINGREY. Mr. Chairman——

Chairman CHAIRMAN. He wouldn't admit that he is from Texas. He is from Georgia and proud of it.

Mr. GINGREY. Mr. Chairman, I think I knew who he was talking about. I do not have a Texas accent, but I would ask unanimous consent to add that language that Mr. Wu recommended to my substitute amendment. I ask unanimous——

Chairman BOEHLERT. And Counsel, can we accomplish that with a gentleman's agreement between two very distinguished colleagues from opposite ends of the country, and——

The COUNSEL. I think——

Chairman BOEHLERT. Yes?

The COUNSEL. I think that we can accomplish that.

Chairman BOEHLERT. All right. Fine.

The COUNSEL. We are looking right now to see how we could do that.

Chairman BOEHLERT. All right. Fine. Mr. Gordon, is it necessary to get the precise word-for——

Mr. GORDON. Not at all.

Chairman BOEHLERT.—word language? Can——

Mr. GORDON. Not at all.

Chairman BOEHLERT.—we proceed? All right. The amendment—the vote is on the amendment to the amendment.

Mr. WU. Thank the gentleman from——

Chairman BOEHLERT. All in favor of the Gingrey substitute as agreed to with the very distinguished offer of the initial proposal. That is the vote. All in favor, say aye. No's? Ayes appear to have it, and the amendment is passed.

Where are we, Counsel? Let us see how many more we have to give our colleagues some indication. How many more do we have? We have got six? Let us move. The next amendment on the roster is amendment number seven offered by Ms. Johnson.

Ms. Johnson, are you ready?

Ms. JOHNSON. Yes. Thank you, Mr. Chairman. I do have an amendment at the desk.

Chairman BOEHLERT. The Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Ms. Eddie Bernice Johnson of Texas.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered. Gentlelady is recognized.

Ms. JOHNSON. Thank you, Mr. Chairman. The amendment requires the National Science Foundation and the Environmental Protection Agency to contract with the National Academy of Sciences for a study on the issues associated with the commercialization of innovations from green chemistry research. As was evident by the Committee's hearing on H.R. 3970, success at commercialization can be problematic, even for technical innovations that seem to be obvious candidates for exploration.

The purpose of the study would be to systematically assess successful and unsuccessful attempts to—at commercialization of green chemistry innovations here and abroad, and attempt to tease out the controlling factors. The study would lead to a report that recommends research areas and research priorities that could assist in overcoming identified barriers to commercialization. This of course would provide a source of outside advice for the interagency working group that the bill directs to plan and coordinate the green chemistry research and development program.

But at least as important as providing advice on research directions, the National Academy of Science is tasked to make recommendations on public policy options that could lead to greater use of green chemistry in commercial products and industrial manufacturing processes. The amendment would allow for a broad consideration of policy options, including federal regulatory tax and procurement policies. The past history of green chemistry commercialization makes clear that innovative ideas flowing from R&D is a necessary but not a sufficient condition to ensure success.

The proposed study would help distill the key policy tools as well as research and development directions. It can help achieve the broad goals, in the words of Section 3 of H.R. 3970, to examine methods by which the Federal Government can create incentives for consideration and use of green chemistry processes and prod-

ucts, and to facilitate the adoption of green chemistry innovations, and I urge my colleagues to support the adoption of the amendment.

Chairman BOEHLERT. Has the gentlelady completed her statement? Yes. All right. Well, the Chair has to oppose this one. I think it is important that we identify barriers to adoption of green chemistry, but the National Academy study is very expensive. It would cost at least $500,000 to get a National Academy study on this very small bill, and at this point, I think that the money in the bill is best spent in the agencies supporting R&D grants, education and dissemination of information. And also, NSF is probably not the right agency to commission this study, since they would not be able to implement its findings.

So for those reasons, the Chair opposes the amendment. Is there any further discussion? If not, the vote is on the amendment. All in favor, say aye. No? No—the no's appear to have it. The no's have it and the amendment is defeated.

The next amendment is amendment number eight, and——

Ms. JOHNSON. Thank you, Mr. Chairman.

Chairman BOEHLERT. Ms. Johnson.

Ms. JOHNSON. Thank you for the use of the hall. I have another amendment at the desk.

Chairman BOEHLERT. The Clerk will report.

The CLERK. Amendment to H.R. 3970 offered by Ms. Eddie Bernice Johnson of Texas.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

The gentlelady is recognized.

Ms. JOHNSON. Thank you, Mr. Chairman. The amendment addresses a problem with the funding authorized for the National Science Foundation in H.R. 3970. At the Science Committee's hearing on the bill on March 17, the NSF directly testified that the Foundation is currently spending $24 million per year on green chemistry research. H.R. 3970, on the other hand, authorizes only $7 million for fiscal year 2005, $7.5 million for fiscal year 2006 and $8 million on fiscal year 2007.

It is inexplicable that the Committee would seek to energize federal planning and coordination for green chemistry research while at the same time cutting NSF's research activities in this area by 70 percent. I cannot believe that the majority's goal in moving this legislation is to reduce federal funding for green research—green chemistry research. But even taking into account disagreements about which specific research projects ought to be included in NSF green chemistry portfolio, the difference in funding between the bill and NSF's estimate is so large as to send only the message that the program is being cut.

Consequently, I offer this amendment to adjust the authorizations of appropriations for NSF to reflect current funding levels attested to by the agency in formal testimony before the Committee. My amendment increases a base funding level for NSF by eight percent in the first year, by five percent in each of the next two years, authorized by H.R. 3970. The funding authority is carved out of the amounts already provided by the current NSF authorization statutes enacted in 2002 so that no new money is provided.

The amendment simply reflects the policy position, which is consistent with the rest of the language of the bill that NSF should devote increased attention and more resources to green chemistry research. I urge my colleagues to support the adoption of the amendment.

Chairman BOEHLERT. The distinguished Chairman of the Subcommittee on Research?

Mr. SMITH OF MICHIGAN. Yes. I think just to clarify—and Representative Johnson and I oversee the National Science Foundation. In their testimony, they used the figure of $26 million, and I think the amendment reflects this. However, it is a definition problem really. NSF includes in that number a lot of things they do that might be related to the whole area of green chemistry, but this amendment I think, Representative Johnson, would limit the flexibility of NSF and more exactly require that they be more specific in spending this money, and I—so I would have to oppose the amendment because I like the flexibility that now exists.

You know, in addition, that number reflects NSF funding, the best proposals that they get from individual investigators, and very little money at NSF is specifically allocated to green chemistry. And so, you know, this bill would not tell NSF to spend less money on green chemistry. So they are going to do what they say they are doing. So I would reluctantly have to oppose the amendment and urge my colleagues to continue to give NSF the flexibility that they have.

Thank you.

Ms. JOHNSON. Mr. Chairman, I would like to comment a little further. On March 17, the testimony by Dr. Bement from the National Science Foundation said Division of Chemistry, $11 million per year; Engineering Directorate, $13 million per year, with the total being $24 million per year. February the 2nd, 2004, CRS memo to the Science Committee: Division of Chemistry, $10.3 million per year, average for fiscal year 2001 through 2003, and no estimate provided for the Engineering Directorate.

So H.R. 3970 has, for fiscal year 2005, $7 million. Fiscal year 2006, $7.5 million and fiscal year 2007, $8 million. Mr. Chairman, I would like to request a recorded vote.

Chairman BOEHLERT. Ms.——

Mr. SMITH OF MICHIGAN. Well, a little discussion——

Chairman BOEHLERT. Discussion isn't completed yet. We have——

Ms. JOHNSON. Okay.

Chairman BOEHLERT. Mr. Smith would like to discuss it. Mr. Gordon would like to discuss it.

Mr. SMITH OF MICHIGAN. Well, just for a moment in reacting, and I think Representative Johnson and I agree that what NSF is doing is probably the right thing to do, but I—still, we should make it clear that this bill is not going to tell the National Science Foundation to do anything less than they are already doing, and it becomes a definition problem, it seems to me, and maybe we could make this clear. And I will, Mr. Chairman, with your permission, make this clear in report language that certainly what they have been doing in terms of spending $26 million with flexibility, that

in no way are we discouraging that amount to continue. But I would oppose the amendment that is going to limit their flexibility.

Chairman BOEHLERT. Thank you very much. Mr. Gordon.

Mr. GORDON. Strike the last word.

Chairman BOEHLERT. The gentleman is recognized.

Mr. GORDON. Once again, Mr. Chairman, I know that there is no intention to undermine green chemistry here. But once again, we have a situation where we are rushing to act and making a mistake. Now if you look in the bill, Section 2 of the bill sets out definitions and it defines green chemistry. Well, when Mr. Bement came to testify, they testified on the bill, and so they knew what they were testifying about, the green chemistry. And that is when they said it was $11 billion for chemistry and $13 million, excuse me, million for chemistry and $13 million for engineering. They—again, they were testifying on the bill and were speaking specifically to those dollars for green chemistry.

And so now what we have done is we are reducing what they can spend in those areas by about 70 percent. Again, that is not—I know that is not what you had intended to do, but we really need to take a look at this because I think that is what we are getting into. And I certainly yield back, yeah. I——

Chairman BOEHLERT. But just again—Mr. Smith. Yeah.

Mr. SMITH OF MICHIGAN. That we are not reducing in any way what they are doing now, and so there is no—and I——

Mr. GORDON. Well, if you are cutting your——

Mr. SMITH OF MICHIGAN. If you don't do it——

Mr. GORDON. If you are putting it——

Mr. SMITH OF MICHIGAN. We should change the language and we will make that clear——

Chairman BOEHLERT. Yeah.

Mr. SMITH OF MICHIGAN.—in report language that we are not going to reduce in any way what NSF is doing now in their effort and our—additionally what they testified.

Mr. GORDON. Well, if you were to explicitly say that would be new money, then I think that that would accomplish your goals. But otherwise, you are going to do not what you want to do, and that is cut their budget significantly, all their spending in that area. Because when they came to testify, they didn't say we spend $11 million dollars in chemistry in general, and some of that goes to green. They said that is what they spend in the green chemistry area.

Mr. SMITH OF MICHIGAN. Well, when we asked—and I'm sorry. May—would the gentleman yield——

Mr. GORDON. Yeah. I yield back. Yes.

Mr. SMITH OF MICHIGAN. And to wrap this up——

Chairman BOEHLERT. Yeah.

Mr. SMITH OF MICHIGAN.—what they do is, coming up with their estimates on what they are spending now, they are reacting to applications coming in and that their estimate—and it does depend a little bit on definition of what they interpret those applications coming in to work in those specific areas. So again, I would reluctantly have to oppose the amendment.

Mr. GORDON. And if the—if—one final comment. Reclaim my time. The CRS also did a memo for the Science Committee where

they looked at the figure, and they came back and said it was 10.3 in the area of chemistry. Again, you have got to be careful what you wish for. You might get your amendment here and I—the result is not going to be what you or this committee I think wants. So we do need to continue to look at this and be sure that your actions are really what you want to accomplish.

Chairman BOEHLERT. We want to make darn sure of that. Dr. Gingrey.

Mr. GINGREY. Mr. Chairman, I also oppose the amendment and really for the exact same reasons that the distinguished Subcommittee Chairman on Research, Mr. Smith, just stated. And I think that his final point, of course, is to make this very clear in the report of the bill and Mr. Chairman, this is a decision you will have to make, of course, but in—whether to specify in that final report that this is indeed new money is something that I am sure you can discuss with the Ranking Member. But I would oppose this amendment.

Chairman BOEHLERT. Thank you very much. If there is no further discussion, the vote is on the amendment. All in favor, say aye. Opposed, no. The no's appear to have it, and——

Ms. JOHNSON. Mr. Chairman, I would like to request a recorded vote.

Chairman BOEHLERT. Clerk will call the roll.

The CLERK. Mr. Boehlert.

Chairman BOEHLERT. No.

The CLERK. Mr. Hall.

[No response.]

The CLERK. Mr. Lamar Smith.

Mr. SMITH OF TEXAS. No.

The CLERK. Mr. Weldon.

[No response.]

The CLERK. Mr. Rohrabacher.

[No response.]

The CLERK. Mr. Calvert.

[No response.]

The CLERK. Mr. Nick Smith.

Mr. SMITH OF MICHIGAN. No.

The CLERK. Mr. Bartlett.

Mr. BARTLETT. No.

The CLERK. Mr. Ehlers.

[No response.]

The CLERK. Mr. Gutknecht.

Mr. GUTKNECHT. No.

The CLERK. Mr. Nethercutt.

[No response.]

The CLERK. Mr. Lucas.

Mr. LUCAS. No.

The CLERK. Ms. Biggert.

Ms. BIGGERT. No.

The CLERK. Mr. Gilchrest.

Mr. GILCHREST. No.

The CLERK. Mr. Akin.

[No response.]

The CLERK. Mr. Johnson.

[No response.]
The CLERK. Ms. Hart.
[No response.]
The CLERK. Mr. Forbes.
Mr. FORBES. No.
The CLERK. Mr. Gingrey.
Mr. GINGREY. No.
The CLERK. Mr. Bishop.
Mr. BISHOP. No.
The CLERK. Mr. Burgess.
Mr. BURGESS. No.
The CLERK. Mr. Bonner.
Mr. BONNER. No.
The CLERK. Mr. Feeney.
Mr. FEENEY. No.
The CLERK. Mr. Neugebauer.
[No response.]
The CLERK. Mr. Gordon.
Mr. GORDON. Aye.
The CLERK. Mr. Costello.
Mr. COSTELLO. Aye.
The CLERK. Ms. Johnson.
Ms. JOHNSON. Aye.
The CLERK. Ms. Woolsey.
Ms. WOOLSEY. Aye.
The CLERK. Mr. Lampson.
Mr. LARSON. Aye.
The CLERK. Mr. Larson.
Mr. LARSON. Yes.
The CLERK. Mr. Udall.
Mr. UDALL. Aye.
The CLERK. Mr. Wu.
[No response.]
The CLERK. Mr. Honda.
Mr. HONDA. Aye.
The CLERK. Mr. Miller.
Mr. MILLER. Aye.
The CLERK. Mr. Davis.
[No response.]
The CLERK. Ms. Jackson Lee.
Ms. JACKSON LEE. Aye.
The CLERK. Ms. Lofgren.
[No response.]
The CLERK. Mr. Sherman.
Mr. SHERMAN. Aye.
The CLERK. Mr. Baird.
[No response.]
The CLERK. Mr. Moore.
Mr. MOORE. Aye.
The CLERK. Mr. Weiner.
Mr. WEINER. Aye.
The CLERK. Mr. Matheson.
Mr. MATHESON. Aye.
The CLERK. Mr. Cardoza.

[No response.]

Chairman BOEHLERT. How is Mr. Rohrabacher recorded?

The CLERK. Mr. Rohrabacher is not recorded.

Mr. ROHRABACHER. I vote no.

Chairman BOEHLERT. How is Mr. Hall recorded?

The CLERK. Mr. Hall is not recorded.

Chairman BOEHLERT. How is Mr. Akin recorded?

The CLERK. Mr. Akin is not recorded.

Mr. AKIN. I vote no.

Chairman BOEHLERT. How is Mr. Wu recorded?

The CLERK. Mr. Wu is not recorded.

Mr. WU. Aye.

Chairman BOEHLERT. How is the Chair recorded?

The CLERK. The Chair has voted as no.

Chairman BOEHLERT. All right. And how is Mr. Hall recorded?

Mr. HALL. Vote aye.

The CLERK. Mr. Hall votes yes.

Chairman BOEHLERT. Clerk will report.

The CLERK. Mr. Chairman, yes 15, no 18.

Chairman BOEHLERT. Thank you. The amendment is defeated. The next amendment is amendment number nine.

Ms. JOHNSON. Thank you, Mr. Chairman, for your fairness.

Chairman BOEHLERT. You are welcome. Amendment number nine, amendment offered by Mr. Honda. Mr. Honda, are you prepared?

Mr. HONDA. Thank you, Mr. Chairman. I have an amendment at the desk.

Chairman BOEHLERT. All right. Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Mr. Honda.

Mr. BOEHLERT. I would ask unanimous consent to dispense with the reading. Without objection, so ordered.

Mr. Honda is recognized.

Mr. HONDA. Thank you, Mr. Chairman. This amendment adds the provision to address issues that effect the adoption and commercialization of green chemistry to the list of activities now authorized under the Green Chemistry Research and Development Program. It was pointed out at the Committee's recent hearing on H.R. 3970 that technological barriers are only one aspect of the challenge associated with the utilization of green chemistry and industrial products and processes. Perhaps a more serious impediment comes from economic and social barriers. Several examples of this phenomena were given in the hearing, such as biodegradable water-soluble polymer for laundry detergent. That even though it would add only a minuscule amount to the cost of a bottle of detergent was nevertheless not adopted by any home products company.

The amendment explicitly authorizes research in areas such as economics or behavioral science, which explores factors beyond the realm of the physical sciences and engineering, but which strongly effect whether the findings from research in such fields find their way into applications of value to society. In addition, the amendment provides for the mechanisms through which views from the public at large may be factored into the research and development

agenda formulated by the interagency green chemistry program, authorized by H.R. 3970.

The information exchange envisioned is two way so that public understanding may be improved regarding the value and potential application of green chemistry, and quoting Professor Woodhouse from his testimony at the Committee's hearing on the bill earlier this month, he quote—I quote "Social science and policy are not ruled out by your proposed wording, but neither are they made as essential as a situation may justify."

This amendment attempts to increase the focus of the interagency green chemistry program on this set of issues. I urge adoption of this amendment, and I yield back the remainder of my time.

[The prepared statement of Mr. Honda follows:]

PREPARED STATEMENT OF REPRESENTATIVE MICHAEL M. HONDA

Explanation of Amendment on Social Science Research and Public Outreach to H.R. 3970

This amendment adds a provision to address issues that affect the adoption and commercialization of green chemistry to the list of activities now authorized under the Green Chemistry Research and Development Program.

As was pointed out at the Committee's recent hearing on H.R. 3970, technological barriers are only one aspect of the challenge associated with the utilization of green chemistry in industrial products and processes. Perhaps a more serious impediment comes from economic and social barriers. Several examples of this phenomenon were given in the hearing, such as a biodegradable, water-soluble polymer for laundry detergent that, even though it would add only a minuscule amount to the cost of a bottle of detergent, was nevertheless not adopted by any home products company.

The amendment explicitly authorizes research in areas such as economics or behavioral science, which explores factors beyond the realm of the physical sciences and engineering, but which strongly affect whether the findings from research in such fields find their way into applications of value to society.

In addition, the amendment provides for mechanisms through which views from the public at large may be factored into the research and development agenda formulated by the interagency green chemistry program authorized by H.R. 3970. The information exchange envisioned is two-way, so that public understanding may be improved regarding the value and potential applications of green chemistry.

Quoting Prof. Woodhouse from his testimony at the Committee's hearing on the bill earlier this month, "social science and policy are not ruled out by your proposed [bill's] wording, but neither are they made as central as the situation may justify." This amendment attempts to increase the focus of the interagency green chemistry program on this set of issues.

I urge adoption of the amendment.

Chairman BOEHLERT. This is one that the Chair reluctantly opposes, and now I would ask, after I give you the reasons, if you would consider withdrawing the amendment with the thought that we might try to work something out that would deal with some of the areas that you are most interested in, in a way that would be acceptable to both the chair and the offer of the amendment. Let me tell you why I oppose it.

First of all, I think it is overly burdensome on the interagency group. That is a problem. It requires the interagency group to convene regular and ongoing public discussions through mechanisms like citizens' panels and consensus conferences and educational events, all of which we usually stand up and applaud. But this is a very small program we are just creating, and we don't want to take time and money in a very small program in its infancy to spend all this money on this other stuff that this prescribed. So we do ask the interagency working group to investigate incentives to

the adoption of green chemistry, and some of these economic and legal questions could be answered through that provision.

So the Chair reluctantly opposes the amendment, but I give the gentleman an offer of working with him to see if we can't get something that would be acceptable to both of us by the time we reach the Floor.

Mr. HONDA. Knowing your word is good, Mr. Chairman, and that the experience that we had in dealing with the nanotechnology bill where there was also a need for—well, a group to discuss the economic and societal impacts on this kind of technology, I would be willing to work with you on the wording. But I need to reemphasize why this is so important in that our experiences from stem cell research, had we done a better job in educating the public, stem cell research progress would not have been stymied by the influx and inflow of a lot of reaction from the community that really virtually stopped all that—activities here in Congress and in research for the advancement of stem cell research.

So I would like to keep—find some way to advance public knowledge and public education as we move into this new arena, because it can create all kinds of fears and unfounded kinds of resistance.

Chairman BOEHLERT. Couldn't agree more with you, and I——

Mr. HONDA. So——

Chairman BOEHLERT.—spend just about every single day of my waking time since I came here 22 years ago——

Mr. HONDA. Right.

Chairman BOEHLERT.—trying to help educate the public on the importance of dealing responsibly with the environment, and I will continue to do that, and I will continue to do that comforted by the knowledge that we are on the same page.

Mr. HONDA. With that, Mr. Chairman, I will withdraw my amendment.

Chairman BOEHLERT. The gentleman has unanimous consent to withdraw the amendment. Without objection, so ordered. The amendment is withdrawn, and the staff is instructed to make certain the Chair works cooperatively, as we always have so effectively, with the gentleman from Oregon.

The next amendment, amendment number ten—where are we? Oh, from California, yeah. Yeah. Amendment number ten. Ms. Jackson Lee.

Ms. JACKSON LEE. I have an amendment at the desk.

Chairman BOEHLERT. Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 offered by Ms. Jackson Lee of Texas.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading, and without objection, so ordered.

Ms. JACKSON LEE. Okay. Thank you very much, Mr. Chairman. I respect the necessity of this committee, in light of the schedule that we have had, to work as quickly on this bill as we possibly can. And I hope the Chairman will view our amendments as attempting to make the bill both better but as well comprehensive for what generate—can generate into a very good idea, and the fact that the bill was recently introduced and had only one hearing and that we are now at the Full Committee instead of a Subcommittee, because we did not have a Subcommittee markup, these amend-

ments I hope will be considered in that context that we hope that in looking at them closely, you will find that they add a lot to it.

My amendment is simple. This amendment authorizes the EPA to establish a grant program to support voluntary partnerships between community groups and industrial facilities to encourage green chemistry and pollution prevention measures. Successful partnerships would lead to reduced use and emission of toxic chemicals into the community, better relations between communities and their local industrial facilities, and cost savings for the facility. The amendment is modeled after programs that have proven successful in Michigan and Texas.

The initial pilot project took place at Dow Chemical Facility in Lapport, Texas. It has demonstrated the value of this type of cooperative engagement. The approach was expanded and improved in Michigan in the Michigan Source Reduction Initiative. The initiative undertaken by Dow Chemical, the Natural Resources Defense Council, community activists from midland and regional environmental groups lead to reduction of chemical releases in ways for the community—Midland community and a cost savings for Dow. My amendment would provide the support for this partnership and the voluntary efforts.

We know in many instances sometimes, there are confrontations between industrial facilities and community groups that generate a great deal of ill will and result in years of legal battles before environmental benefits are achieved. The process pioneered by Dow and NRDC demonstrates that another approach is possible. One of the barriers of this type of cooperative effort is a lack of technical expertise available to the community groups. The Department of Defense and EPA have similar programs authorized to support community groups involved with Superfund site cleanups and issues related to military bases.

The grant program created by this amendment would enable community groups to obtain technical assistance to work cooperatively with their partner facility. This lists the grants that are available, and might I say, Mr. Chairman, in the last 24 hours, many of you have seen the news with the terrible fire in my community. This kind of community effort would be helpful in the post-cleanup of that fire. We are very grateful that—no loss of life and no injuries to our knowledge, but it certainly was a very explosive fire in Texas City. This is just the kind of amendment that would help community relations and promote the kind of partnership that I think this bill lends itself to.

I ask my colleagues to support the amendment.

[The prepared statement of Ms. Jackson Lee follows:]

PREPARED STATEMENT OF REPRESENTATIVE SHEILA JACKSON LEE

I have an amendment at the desk.

Thank you, Mr. Chairman.

This amendment authorizes the EPA to establish a grant program to support voluntary partnerships between community groups and industrial facilities to encourage green chemistry and pollution prevention measures. Successful partnerships would lead to reduced use and emission of toxic chemicals in the community, better relations between communities and their local industrial facilities, and cost savings for the facility. The amendment is modeled after programs that have proven successful in Michigan and Texas.

The initial pilot project took place at Dow Chemical's facility in La Porte, TX. It demonstrated the value of this type of cooperative engagement. The approach was expanded and improved in Michigan, in the "Michigan Source Reduction Initiative." The initiative undertaken by Dow Chemical, the Natural Resources Defense Council, community activists from Midland, and regional environmental groups led to reduction of chemical releases and waste for the Midland community and to a cost savings for Dow.

This amendment would provide support for voluntary efforts undertaken by people interested in working cooperatively to achieve a cleaner community environment. We know of many confrontations between industrial facilities and community groups that generate a great deal of ill will and result in years of legal battles before environmental benefits are achieved. The process pioneered by Dow and NRDC demonstrates that another approach is possible.

One of the barriers to this type of cooperative effort is the lack of technical expertise available to community groups. The Department of Defense and EPA have similar programs authorized to support community groups involved with Superfund site cleanups and issues related to military bases.

The grant program created by this amendment would enable community groups to obtain technical assistance to work cooperatively with their partner facility. Grants would only be awarded to groups that have established a partnership with a local industrial facility. Grants are capped at $100,000 for any single project (they could run for two years or more) and the applicants are required to provide a 20 percent match of federal funds—a condition similar to that in the Superfund technical assistance grants.

We should support and facilitate cooperative efforts to achieve environmental protection and environmental benefits. This amendment is a natural extension of the Green Chemistry Act. I urge support for this amendment.

Chairman BOEHLERT. Thank you very much. The Chair will oppose it for the same reason I opposed earlier amendments. I think is the right church, the wrong pew. What you want to do is something I want to do too, but this is not the vehicle to do it at. This is a vehicle that is focusing on research and development in green chemistry, and that is what we want to keep the focus on. What you are talking about in your experience down in Texas and experiences other Members have had around the country, we have got to bring the communities into the cooperative arena in working together and all that sort of stuff. But those are for other programs.

This is a specific, very modest program. Very modest, just dealing with research and development, and I am going to stick to the basic objective. And secondly, it refer—it requires a trigger to refer it to another Committee, which I think would probably not just slow it but halt progress on the bill. So I would like to get moving with this.

Gentleman from Tennessee.

Mr. GORDON. Mr. Chairman, let me just again quickly add that this is a voluntary program and this is modeled after successful Superfund programs that are already working. This should not be controversial in any way.

Ms. JACKSON LEE. If the gentleman would yield.

Mr. GORDON. Yes, certainly I do.

Ms. JACKSON LEE. Let me thank Mr. Gordon very much. You are quite right, and not only that, the question is whether we are being modest or whether we are trying to be sufficiently comprehensive to help as many people as possible with this legislation, and I think the community partnerships are simply a winner for Congress when communities and industries can work together to fight against a negative environmental impact.

And I would yield back to the gentleman.

Chairman BOEHLERT. Couldn't agree more. They are very useful and they serve a very valuable purpose, but that is not the purpose of this particular, very carefully crafted bill, and we are starting very modestly and we want to focus on R&D.

Are there any further comments? Anyone seek further comments? Then the vote is on the amendment. All in favor, say aye. Opposed nay. The nays appear to have it. The amendment is defeated.

Ms. JACKSON LEE. I would like to be able to do my next amendment because I won't be able to come back and——

Chairman BOEHLERT. Okay. Tell us—the Clerk how Ms. Johnson is recorded on amendment number eight, the amendment previously——

The CLERK. Mr. Chairman, Ms. Johnson is not recorded.

Chairman BOEHLERT. Thank you. The Chair will duly note the record and the gentleman's intentions.

The next amendment, amendment number 11, is this the last—this will be the last one. Ms. Jackson Lee, are you prepared to proceed?

Ms. JACKSON LEE. Amendment at the desk, number——

Chairman BOEHLERT. Clerk will read the amendment.

The CLERK. Amendment to H.R. 3970 offered by Ms. Jackson Lee of Texas.

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

The gentlelady is recognized.

Ms. JACKSON LEE. Thank you very much, Mr. Chairman. As I indicated, this bill was introduced about 15 days ago, and as well, we had no Subcommittee markup, and I think it is important for this committee, the full Committee, to fix what we can to make this bill comprehensive. My amendment fixes a technical problem in the bill to ensure that our intention to promote green chemistry will actually get funded as intended. H.R. 3970 purports to be a bill to strengthen federal planning and coordination of green chemistry research and development, and to that end authorize appropriations at four agencies.

In each case, the funding authority is couched in language that specifies the amounts provided are from sums otherwise authorized to be appropriated. That is, the bill does not authorize any new money, but carves the amounts from existing statutory authorizations, and we know that that does not provide the kind of support this legislation needs. This formulation makes some sense for the National Science Foundation, which has a generous authorization, appropriations in place for each year, covered by H.R. 3970. However, for the other three agencies in the bill, no current authorization of appropriations has been passed into law.

While legislation has been moved in the House for the Department of Energy, no general authorization bills are currently in the Committee's agenda for NIST or EPA, and final enactment for the DOE authorization appears doubtful. Where lies the opportunity to fund this legislation? How can we put teeth in legislation that we are passing and no money? As a result, H.R. 3970 does not actually provide a funding authorization for three of the four agencies in the bill. That means the job cannot get done.

It is worse than being silent on funding because without such language, it would be effectively a such-sums-as-may-be-necessary authorization, which really has no teeth. It is a paper tiger. Under the current language, no funds are authorized until and unless a subsequent authorization is enacted. It seems inappropriate for an authorizing Committee to be calling for appropriation of an—unauthorized funds. The amendment strikes the phrase from sums otherwise authorized to be appropriated for DOE, NIST and EPA.

Mr. Chairman, I would ask my colleagues, because we want this to be an effective bill and we want the job to get done, to actually provide language that says from an actual authorization of appropriations. Otherwise, we don't have a bill that we can stand on and promote throughout the Nation and our respective Congressional Districts. I urge adoption of this amendment.

[The prepared statement of Ms. Jackson Lee follows:]

PREPARED STATEMENT OF REPRESENTATIVE SHEILA JACKSON LEE

Mr. Chairman,

This amendment fixes a technical problem in the bill to ensure that our intention to promote green chemistry will actually get funded as intended. H.R. 3970 purports to be a bill to strengthen federal planning and coordination of green chemistry research and development and to that end authorizes appropriations at four agencies.

In each case, the funding authority is couched in language that specifies the amounts provided are from "sums otherwise authorized to be appropriated." That is, the bill does not authorize any new money, but carves the amounts from existing statutory authorizations. This formulation makes some sense for the National Science Foundation, which has a generous authorization of appropriations in place for each year covered by H.R. 3970.

However, for the other three agencies in the bill, no current authorization of appropriations has been passed into law. While legislation has been moved in the House for the Department of Energy, no general authorization bills are currently on the Committee's agenda for NIST or EPA. And final enactment for the DOE authorization appears doubtful.

As a result, H.R. 3970 does not actually provide a funding authorization for three of the four agencies in the bill. It is worse than being silent on funding, because without such language, it would be effectively a "such sums as may be necessary" authorization. Under the current language, no funds are authorized until, and unless, a subsequent authorization is enacted. It seems inappropriate for an authorizing committee to be calling for appropriation of unauthorized funds.

This amendment simply strikes the phrase "from sums otherwise authorized to be appropriated" for DOE, NIST and EPA. The effect of the amendment is to authorize actual funding for the three agencies to carry out their parts of the green chemistry program.

If the green chemistry program established by H.R. 3970 is worthy of support, it should be given an actual authorization of appropriations. Otherwise it is simply window dressing.

I urge adoption of the amendment.

Chairman BOEHLERT. Thank you, and the Chair opposes this amendment, not that I oppose adding more money for green chemistry. Boy, I want to add it by the truckload. But this deals with such sums in a—from existing money, and that's what we have to focus on because this is not the time nor the place to add new programs, no matter how laudable the goals, when we know darn well that chances are slim to none that they would get anyplace, simply because we are in a very difficult financial situation as a Nation right now.

And so we are starting with a modest program. We will use existing funds. We hope to have something that we can brag about and come back and—next year or the year after and gets some real money into the whole operation, but let us start small.

Mr. Gordon.

Mr. GORDON. Mr. Chairman, I have to compliment Ms. Jackson Lee for trying to help solve what I think is an unintended consequence here. As she pointed out, DOE, NIST and EPA do not have authorized funds, and in all likelihood, there is not going to be an authorization. And so to say take funds out of what is already authorized there means you have no funds because there are no funds authorized and none intended to. So what you are going to wind up with is a zero here.

So again, Ms. Jackson Lee, thank you for helping us try to stop from making a mistake here.

Ms. JACKSON LEE. Will the gentleman just yield? To make it plainer—would the gentleman yield? To make it plainer, we are—actually have zero funding for major aspects of the bill, and when I understand the word zero, though I know we want to have a zero-based budget—but zero funding means we have zero activity in legislation that we are all trying to work on. So I would ask my colleagues to consider having funds authorized for this legislation.

Chairman BOEHLERT. We are saying that within the existing authorization—which is more than the appropriators appropriate, I might add. Within the existing authorization, which we have already approved, they will have the flexibility to use their existing authorization to promote green chemistry, and we think that makes a lot of sense.

Mr. GORDON. Mr. Chairman, again, I know your heart is in the right place, but there is no authorization for DOE, NIST and EPA, and there is likely not to be any authorization, so you can't take money out of authorized funds that aren't authorized.

Chairman BOEHLERT. In those instances, the—essentially the appropriators come forward with money and they—that is what keeps the agency going, and that is how—there is where you get the pot to take the money from.

Mr. GORDON. Well, then change the language to the appropriation rather than authorized because there is no authorization.

Chairman BOEHLERT. Counsel? Yeah. Same thing. With no authorization, the appropriation automatically becomes the authorization. So you know and I know that these agencies get appropriations. If they are not authorized, they can use those appropriations if this passes, as we intend it to pass, to promote green chemistry.

Ms. JACKSON LEE. Would the——

Chairman BOEHLERT. It is as simple as that.

Ms. JACKSON LEE.—Chairman yield for a moment, just——

Chairman BOEHLERT. I will yield for one further moment, but——

Ms. JACKSON LEE. Thank you, Mr. Chairman.

Chairman BOEHLERT.—we are already close to——

Ms. JACKSON LEE. Well, you——

Chairman BOEHLERT.—recessing.

Ms. JACKSON LEE. I understand, and you have been a champion on authorizing responsibility. I just simply think without the authorization, how can we rely upon appropriators in this instance? And I thank the Chairman.

Chairman BOEHLERT. Thank you. Now if there is no further discussion, the vote is on the amendment. All in favor, say aye. Op-

posed nay. The nays appear to have it. The amendment is defeated. We have vote on. Would the gentlelady be considerate of her other colleagues, knowing full well what the outcome of the vote would be?

Ms. JACKSON LEE. Consider it——

Chairman BOEHLERT. It is hard to ask——

Ms. JACKSON LEE.—a point——

Chairman BOEHLERT.—somebody to be considerate of colleagues? I don't think—the amendment is defeated. Now the—what is next?

Mr. HONDA. Mr. Chairman——

Chairman BOEHLERT. Mr. Honda.

Mr. HONDA. I would ask for unanimous consent to present an amendment at the table on behalf of Lofgren, Congresswoman Lofgren.

Chairman BOEHLERT. Gentleman is recognized. The Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970 by Ms. Lofgren.

Mr. HONDA. Yes, Mr. Chairman. If I may, I will enter into the record her written statement and I will be brief on the amendment. This is——

Chairman BOEHLERT. We have 6:40. Is it the gentleman's intention to proceed with this and call for a vote?

Mr. HONDA. Just to present it and to make my point that her amendment is very important in—with regards to the scope of the bill that the author is presenting here. Just so—Mr. Chairman just quickly if I can submit her written statement and then comment that the EPA, in consultation with the Department of Homeland Security, will produce a report that identifies the most dangerous chemical substances from the perspective of security in need of a green chemistry alternative. That report will be provided to the interagency working group as further data in their effort to develop a coherent green chemistry program.

And Mr. Chairman, the amendment—I mean the bill is so large in its scope that it is incomprehensible to understand how we can move forward without the inclusion of this amendment so that it would be——

Chairman BOEHLERT. Is it the gentleman's intention to seek a vote on the amendment?

Mr. HONDA. Yes, sir.

Chairman BOEHLERT. The Committee is recessed until 10:00 tomorrow morning.

[Whereupon, at 12:00 p.m., the Committee recessed, to reconvene at 10:00 a.m. Thursday, April 1, 2004.]

Appendix, March 31, 2004:

AMENDMENT ROSTER, H.R. 3970, SECTION-BY-SECTION ANALYSIS

COMMITTEE ON SCIENCE - FULL COMMITTEE MARKUP - MARCH 31, 2004

AMENDMENT ROSTER

H.R. 3970, Green Chemistry Research and Development Act of 2004

No.	Sponsor	Description	Results
1.	Mr. Boehlert	Technical Amendment	--Adopted by a voice vote.
2.	Mr. Gordon 009.XML	Amendment would establish a manufacturing extension center green suppliers network grant program.	
2(a)	Mr. Gingrey	Substitute Amendment to the Amendment Offered by Mr. Gordon.	--Adopted by a voice vote.
3.	Mr. Gordon 014.XML	Amendment on undergraduate education in chemistry and chemical engineering.	
3(a)	Mr. Gingrey	Substitute Amendment to the Amendment Offered by Mr. Gordon.	--Withdrawn
4.	Ms. Johnson	Amendment would include nonprofit organizations in collaborative R&D partnerships.	
4(a)	Mr. Gingrey	Substitute Amendment to the Amendment Offered by Ms. Johnson.	--Adopted by a voice vote.
5.	Mr. Wu	Amendment would establish partnerships to retrain chemists and chemical engineers in green chemistry.	
5(a)	Mr. Gingrey	Substitute Amendment to the Amendment Offered by Mr. Wu.	--Adopted (as amended by unanimous consent) by a voice vote.
6.	Mr. Gordon 013.XML	Amendment would provide for Federal procurement of environmentally preferable products.	--Defeated by a Roll Call vote: Y-14; N-19.

7.	Ms. Johnson	Amendment would require a study on barriers to the successful commercialization of green chemistry.	--Defeated by a voice vote.
8.	Ms. Johnson	Amendment would adjust NSF authorization figures.	--Defeated by a roll call vote: Y-15; N-18.
9.	Mr. Honda	Amendment would provide for research on ethical, legal, environmental, and other appropriate societal concerns.	--Withdrawn
10.	Ms. Jackson Lee	Amendment would establish a community green chemistry grant program.	--Defeated by a voice vote.
11.	Ms. Jackson Lee	Amendment would delete references to "sums otherwise authorized to be appropriated".	--Defeated by a voice vote.
12.	Ms. Lofgren	Amendment on using green chemistry to reduce vulnerabilities to terrorism.	--Scheduled for April 1, 2004.
13.	Mr. Baird	Amendment would require expedited approval of green chemistry products useful for controlling invasive species.	--Withdrawn

AMENDMENT TO H.R. 3970
OFFERED BY MR. BOEHLERT

Redesignate section 4 as section 5.

Insert after section 3 the following new section:

1 **SEC. 4. BIENNIAL REPORT.**

2 Section 37(a) of the Science and Engineering Equal
3 Opportunities Act (42 U.S.C. 1885d(a)) is amended by
4 striking "By January 30, 1982, and biennially thereafter"
5 and inserting "By January 30 of each odd-numbered
6 year".

AMENDMENT TO H.R. 3970

OFFERED BY MR. GORDON

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. MANUFACTURING EXTENSION CENTER GREEN SUP-**
2 **PLIERS NETWORK GRANT PROGRAM.**
3 (a) AMENDMENT.—Section 25 of the National Insti-
4 tute of Standards and Technology Act (15 U.S.C. 278k)
5 is amended by adding at the end of the following new sub-
6 section:
7 "(e) GREEN SUPPLIERS NETWORK GRANT PRO-
8 GRAM.—
9 "(1) ESTABLISHMENT.—The Director shall es-
10 tablish, within the Manufacturing Extensions Part-
11 nership program under this section and section 26
12 of this Act, a program of competitive awards to Cen-
13 ters, or a consortia of centers.
14 "(2) PURPOSE.—The purpose of the program
15 under this subsection is to develop projects involving
16 Centers, large manufacturers, and their supply chain
17 in the development of good business approaches to

1 prevent pollution. The goal of these projects shall be
2 to enable supply chain manufacturers to continu-
3 ously improve products and processes, increase en-
4 ergy efficiency, identify cost-saving opportunities,
5 and optimize resources and technologies with the
6 aim of reducing or eliminating the use or generation
7 of hazardous substances.

8 "(3) APPLICATIONS.—Applications for awards
9 under this subsection shall be submitted in such
10 manner, at such time, and containing such informa-
11 tion as the Director shall require, in consultation
12 with the Administrator of the Environmental Protec-
13 tion Agency.".

14 (b) AUTHORIZATION OF APPROPRIATIONS.—There
15 are authorized to be appropriated to the Secretary of Com-
16 merce for the Green Suppliers Network Grant Program
17 under section 25(e) of the National Institute of Standards
18 and Technology Act, as added by subsection (a) of this
19 section—

20 (1) $2,500,000 for fiscal year 2005;
21 (2) $3,500,000 for fiscal year 2006; and
22 (3) $4,500,000 for fiscal year 2007.

AMENDMENT TO H.R. 3970

OFFERED BY Mr. Gingrey

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. MANUFACTURING EXTENSION CENTER GREEN SUP-**
2 **PLIERS NETWORK GRANT PROGRAM.**
3 Section 25(a) of the National Institute of Standards
4 and Technology Act (15 U.S.C. 278k(a)) is amended—
5 (1) by striking "and" at the end of paragraph
6 (4);
7 (2) by striking the period at the end of para-
8 graph (5) and inserting "; and"; and
9 (3) by adding at the end the following:
10 "(6) the enabling of supply chain manufactur-
11 ers to continuously improve products and processes,
12 increase energy efficiency, identify cost-saving oppor-
13 tunities, and optimize resources and technologies
14 with the aim of reducing or eliminating the use or
15 generation of hazardous substances.".

AMENDMENT TO H.R. 3970
OFFERED BY MR. GORDON

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. UNDERGRADUATE EDUCATION IN CHEMISTRY AND**
2 **CHEMICAL ENGINEERING.**

3 (a) PROGRAM AUTHORIZED.—(1) As part of the Pro-
4 gram activities under section 3(b)(4), the Director of the
5 National Science Foundation shall carry out a program
6 to award grants to institutions of higher education to sup-
7 port efforts by such institutions to revise their under-
8 graduate curriculum in chemistry and chemical engineer-
9 ing to incorporate green chemistry concepts and strate-
10 gies.

11 (2) Grants shall be awarded under this section on a
12 competitive, merit-reviewed basis and shall require cost
13 sharing from non-Federal sources, at a minimum, to
14 match the Federal funding.

15 (b) SELECTION PROCESS.—(1) An institution of
16 higher education seeking funding under this section shall
17 submit an application to the Director at such time, in such

1 manner, and containing such information as the Director
2 may require. The application shall include at a
3 minimum—
4 (A) a description of the content and schedule
5 for adoption of the proposed curricular revisions to
6 the courses of study offered by the applicant in
7 chemistry and chemical engineering; and
8 (B) a description of the source and amount of
9 cost sharing to be provided.
10 (2) In evaluating the applications submitted under
11 paragraph (1), the Director shall consider, at a
12 minimum—
13 (A) the level of commitment demonstrated by
14 the applicant in carrying out and sustaining lasting
15 curriculum changes in accordance with subsection
16 (a)(1); and
17 (B) the amount of cost sharing to be provided.
18 (c) AUTHORIZATION OF APPROPRIATIONS.—In addi-
19 tion to amounts authorized under section 5, from sums
20 otherwise authorized to be appropriated, there are author-
21 ized to be appropriated to the National Science Founda-
22 tion for carrying out this section $15,000,000 for fiscal
23 year 2005, $15,750,000 for fiscal year 2006, and
24 $16,540,000 for fiscal year 2007.

AMENDMENT TO H.R. 3970

OFFERED BY Mr. Gingrey

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. UNDERGRADUATE EDUCATION IN CHEMISTRY AND**
2 **CHEMICAL ENGINEERING.**

3 (a) PROGRAM AUTHORIZED.—(1) As part of the Pro-
4 gram activities under section 3(b)(4), the Director of the
5 National Science Foundation shall carry out a program
6 to award grants to institutions of higher education to sup-
7 port efforts by such institutions to revise their under-
8 graduate curriculum in chemistry and chemical engineer-
9 ing to incorporate green chemistry concepts and strate-
10 gies.

11 (2) Grants shall be awarded under this section on a
12 competitive, merit-reviewed basis.

13 (b) SELECTION PROCESS.—An institution of higher
14 education seeking funding under this section shall submit
15 an application to the Director at such time, in such man-
16 ner, and containing such information as the Director may
17 require. The application shall include at a minimum a de-

1 scription of the content and schedule for adoption of the
2 proposed curricular revisions to the courses of study of-
3 fered by the applicant in chemistry and chemical engineer-
4 ing.

AMENDMENT TO H.R. 3970
OFFERED BY MS. EDDIE BERNICE JOHNSON OF TEXAS

Page 3, lines 1 through 3, amend subparagraph (B) to read as follows:

1 (B) merit-reviewed competitive grants to
2 fund collaborative research and development
3 partnerships among universities, industry, and
4 nonprofit organizations having demonstrated
5 experience and capabilities in green chemistry;

AMENDMENT TO H.R. 3970

OFFERED BY Mr. Gingrey

Page 3, lines 1 through 3, amend subparagraph (B) to read as follows:

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

AMENDMENT TO H.R. 3970
OFFERED BY MR. WU

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. PARTNERSHIPS IN GREEN CHEMISTRY.**

2 (a) PROGRAM AUTHORIZED.—(1) The agencies par-
3 ticipating in the Program shall carry out a joint, coordi-
4 nated program to award grants to institutions of higher
5 education to establish partnerships with companies in the
6 chemical industry to retrain chemists and chemical engi-
7 neers in the use of green chemistry concepts and strate-
8 gies.

9 (2) Grants shall be awarded under this section on a
10 competitive, merit-reviewed basis and shall require cost
11 sharing from non-Federal sources by members of the part-
12 nerships.

13 (3) In order to be eligible to receive a grant under
14 this section, an institution of higher education shall enter
15 into a partnership with two or more companies in the
16 chemical industry. Such partnerships may also include

1 other institutions of higher education and professional as-
2 sociations.
3 (4) Grants awarded under this section shall be used
4 for activities to provide retraining for chemists or chemical
5 engineers in green chemistry, including—
6 (A) the development of curricular materials and
7 the designing of undergraduate and graduate level
8 courses; and
9 (B) publicizing the availability of professional
10 development courses of study in green chemistry and
11 recruiting graduate scientists and engineers to pur-
12 sue such courses.
13 Grants may provide stipends for individuals enrolled in
14 courses developed by the partnership.
15 (b) SELECTION PROCESS.—(1) An institution of
16 higher education seeking funding under this section shall
17 submit an application at such time, in such manner, and
18 containing such information as shall be specified by the
19 Interagency Working Group and published in a proposal
20 solicitation for the program. The application shall include
21 at a minimum—
22 (A) a description of the partnership and the
23 role each member will play in implementing the pro-
24 posal;

1 (B) a description of the courses of study that
2 will be provided;
3 (C) a description of the number and size of sti-
4 pends, if offered;
5 (D) a description of the source and amount of
6 cost sharing to be provided: and
7 (E) a description of the manner in which the
8 partnership will be continued after assistance under
9 this section ends.
10 (2) The evaluation of the applications submitted
11 under paragraph (1) shall be carried out in accordance
12 with procedures developed by the Interagency Working
13 Group and shall consider, at a minimum—
14 (A) the ability of the partnership to carry out
15 effectively the proposed activities;
16 (B) the degree to which such activities are like-
17 ly to prepare chemists and chemical engineers suffi-
18 ciently to be competent to apply green chemistry
19 concepts and strategies in their work; and
20 (C) the amount of cost sharing to be provided.

AMENDMENT TO H.R. 3970

OFFERED BY Mr. Gingrey

Page 3, line 21, insert ", and professional chemists and chemical engineers," after "graduate students".

including through partnerships with industry,

AMENDMENT TO H.R. 3970
OFFERED BY MR. GORDON

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. FEDERAL PROCUREMENT OF ENVIRONMENTALLY**
2 **PREFERABLE PRODUCTS.**
3 (a) DEFINITIONS.—For purposes of this section—
4 (1) ADMINISTRATOR.—The term "Adminis-
5 trator" means the Administrator of the Environ-
6 mental Protection Agency.
7 (2) ENVIRONMENTALLY PREFERABLE PROD-
8 UCT.—The term "environmentally preferable prod-
9 uct" means a commercial or industrial product that
10 has a lesser or reduced adverse effect on human
11 health and the environment when compared with
12 competing products that serve the same purpose.
13 This comparison may consider factors such as raw
14 materials acquisition, production, manufacturing,
15 packaging, distribution, reuse, operation, mainte-
16 nance, or disposal of the product.

1 (b) APPLICATION OF SECTION.—Except as provided
2 in subsection (d), each Federal agency shall comply with
3 the requirements set forth in this section, with respect to
4 any purchase or acquisition of a procurement item where
5 the purchase price of the item exceeds $10,000 or where
6 the quantity of such items or of functionally equivalent
7 items purchased or acquired by that agency in the course
8 of the preceding fiscal year was $10,000 or more.
9 (c) PROCUREMENT SUBJECT TO OTHER LAW.—Any
10 procurement, by any Federal agency, which is subject to
11 regulations of the Administrator under section 6962 of
12 title 42, United States Code, shall not be subject to the
13 requirements of this section to the extent that such re-
14 quirements are inconsistent with such regulations.
15 (d) PROCUREMENT PREFERENCE.—
16 (1) IN GENERAL.—Except as provided in para-
17 graph (2), after the date specified in applicable
18 guidelines prepared pursuant to subsection (e), each
19 Federal agency which procures any items designated
20 in such guidelines shall, in making procurement de-
21 cisions, give preference to environmentally preferable
22 products, consistent with maintaining a satisfactory
23 level of competition, considering such guidelines.

1 (2) AGENCY FLEXIBILITY.—Notwithstanding
2 paragraph (1), an agency may decide not to procure
3 such items if the agency determines that the items—
4 (A) are not reasonably available within a
5 reasonable period of time;
6 (B) fail to meet the performance standards
7 set forth in the applicable specifications or fail
8 to meet the reasonable performance standards
9 of the procuring agency; or
10 (C) are available only at an unreasonable
11 price.
12 (3) CERTIFICATION OF COMPLIANCE.—After
13 the date specified in any applicable guidelines pre-
14 pared pursuant to subsection (e), contracting offices
15 shall require that, with respect to environmentally
16 preferable products, vendors certify that the environ-
17 mentally preferable products to be used in the per-
18 formance of the contract will comply with the appli-
19 cable specifications or other contractual require-
20 ments.
21 (d) SPECIFICATIONS.—All Federal agencies that have
22 the responsibility for drafting or reviewing specifications
23 for procurement items procured by Federal agencies shall,
24 within one year after the date of publication of applicable
25 guidelines under subsection (e), or as otherwise specified

1 in such guidelines, ensure that such specifications require
2 the use of environmentally preferable products consistent
3 with the requirements of this section.
4 (e) GUIDELINES.—
5 (1) IN GENERAL.—The Administrator, in con-
6 sultation with the Administrator of General Services,
7 and the Secretary of Commerce (acting through the
8 Director of the National Institute of Standards and
9 Technology), shall prepare, and from time to time
10 revise, guidelines for the use of procuring agencies
11 in complying with the requirements of this section.
12 Such guidelines shall—
13 (A) designate those items which are envi-
14 ronmentally preferable and whose procurement
15 by procuring agencies will carry out the objec-
16 tives of this section;
17 (B) set forth recommended practices with
18 respect to the procurement of environmentally
19 preferable products and items containing such
20 materials and with respect to certification by
21 vendors of the environmentally preferable prod-
22 ucts used; and
23 (C) provide information as to the avail-
24 ability, relative price, performance, and environ-

1 mental and public health benefits of such mate-
2 rials and items.
3 (2) CONSIDERATIONS.—In making a designa-
4 tion under paragraph (1)(A), the Administrator
5 shall, at a minimum, consider—
6 (A) the availability of such items; and
7 (B) the economic and technological feasi-
8 bility of using such items, including life cycle
9 costs.
10 (3) FINAL GUIDELINES.—The Administrator
11 shall prepare final guidelines under this subsection
12 within 180 days after the date of enactment of this
13 Act.
14 (f) OFFICE OF FEDERAL PROCUREMENT POLICY.—
15 The Office of Federal Procurement Policy, in cooperation
16 with the Administrator, shall implement the requirements
17 of this section. It shall be the responsibility of the Office
18 of Federal Procurement Policy to coordinate this policy
19 with other policies for Federal procurement to implement
20 the requirements of this section, and, every two years be-
21 ginning in 2005, to report to the Congress on actions
22 taken by Federal agencies and the progress made in the
23 implementation of this section, including agency compli-
24 ance with subsection (d).
25 (g) PROCUREMENT PROGRAM.—

1 (1) REQUIREMENT.—Within one year after the
2 date of publication of applicable guidelines under
3 subsection (e), each Federal agency shall develop a
4 procurement program which will ensure that envi-
5 ronmentally preferable products will be purchased to
6 the maximum extent practicable and which is con-
7 sistent with applicable provisions of Federal procure-
8 ment law.
9 (2) CONTENTS.—Each procurement program
10 required under this subsection shall, at a minimum,
11 contain—
12 (A) an environmentally preferable products
13 preference program;
14 (B) an agency promotion program to pro-
15 mote the preference program adopted under
16 subparagraph (A); and
17 (C) annual review and monitoring of the
18 effectiveness of an agency's procurement pro-
19 gram.
20 (h) LABELING.—
21 (1) IN GENERAL.—The Administrator shall es-
22 tablish a voluntary program under which the Admin-
23 istrator authorizes producers of environmentally
24 preferable products to use the label "EPA Certified
25 Environmentally Preferable Product".

1 (2) ELIGIBILITY CRITERIA.—Within one year
2 after the date of enactment of this Act, the Adminis-
3 trator shall issue criteria for determining which
4 products may qualify to receive the label under para-
5 graph (1). The criteria shall encourage the purchase
6 of environmentally preferable products, and should,
7 to the maximum extent possible, be consistent with
8 the guidelines issued under subsection (e).
9 (3) USE OF THE LABEL.—The Administrator
10 shall ensure that the label referred to in paragraph
11 (1) is used only on products that meet the criteria
12 issued pursuant to paragraph (2).
13 (4) RECOGNITION.—The Administrator shall es-
14 tablish a voluntary program to recognize Federal
15 agencies and private entities that use a substantial
16 amount of environmentally preferable products.
17 (i) LIMITATION.—Nothing in this section shall apply
18 to the procurement of motor vehicle fuels or electricity.
19 (j) FUNDING.—
20 (1) AUTHORIZATION OF APPROPRIATIONS.—
21 There are authorized to be appropriated such sums
22 as may be necessary to carry out this section.
23 (2) FUNDING FOR TESTING OF ENVIRON-
24 MENTALLY PREFERABLE PRODUCTS.—

1 (A) IN GENERAL.—The Administrator may
2 use $1,000,000 for each of fiscal years 2005
3 through 2008 to support testing of environ-
4 mentally preferable products to carry out this
5 section.
6 (B) USE OF FUNDS.—Amounts made
7 available under subparagraph (A) may be used
8 to support contracts or cooperative agreements
9 with entities that have experience and special
10 skills to conduct such testing.
11 (C) PRIORITY.—The Administrator may
12 give priority to the testing of products for
13 which private sector firms provide cost sharing
14 for the testing.

COMMITTEE ON SCIENCE - ROLL CALL – 108th CONGRESS

DATE: 3/31/04 **SUBJECT:** Amendment #6 Offered by Mr. Gordon

Rm.	Phone	Member	Yes	No	Not Voting	Present	Absent
2246	53665	Mr. Boehlert, R-NY		✓			
2405	56673	Mr. Hall, R-TX		✓			
2231	54236	Mr. Lamar Smith, R-TX					
2466	52011	Mr. Weldon, R-PA					
2338	52415	Mr. Rohrabacher, R-CA		✓			
2201	51986	Mr. Calvert, R-CA		✓			
2305	56276	Mr. Nick Smith, R-MI		✓			
2412	52721	Mr. Bartlett, R-MD		✓			
1714	53831	Mr. Ehlers, R-MI		✓			
425	52472	Mr. Gutknecht, R-MN		✓			
2443	52006	Mr. Nethercutt, R-WA					
2342	55565	Mr. Lucas, R-OK		✓			
1213	53515	Mrs. Biggert, R-IL		✓			
2245	55311	Mr. Gilchrest, R-MD		✓			
117	52561	Mr. Akin, R-MO		✓			
1229	52371	Mr. Johnson, R-IL		✓			
1508	52565	Ms. Hart, R-PA		✓			
307	56365	Mr. Forbes, R-VA					
1118	52931	Mr. Gingrey, R-GA		✓			
124	50453	Mr. Bishop, R-UT		✓			
1721	57772	Mr. Burgess, R-TX		✓			
315	54931	Mr. Bonner, R-AL					
323	52706	Mr. Feeney, R-FL		✓			
1026	54005	Mr. Neugebauer, R-TX		✓			
2304	***54231***	***Mr. Gordon, D-TN***	✓				
2454	***55661***	***Mr. Costello, D-IL***	✓				
1511	***58885***	***Ms. Johnson, D-TX***	✓				
2263	***55161***	***Ms. Woolsey, D-CA***	✓				
405	***56565***	***Mr. Lampson, D-TX***	✓				
1005	***52265***	***Mr. Larson, D-CT***					
115	***52161***	***Mr. Udall, D-CO***	✓				
1023	***50855***	***Mr. Wu, D-OR***	✓				
1713	***52631***	***Mr. Honda, D-CA***	✓				
1505	***53032***	***Mr. Miller, D-NC***	✓				
504	***56831***	***Mr. Davis, D-TN***					
2435	***53816***	***Ms. Jackson-Lee, D-TX***	✓				
102	***53072***	***Ms. Lofgren, D-CA***					
1030	***55911***	***Mr. Sherman, D-CA***	✓				
1421	***53536***	***Mr. Baird, D-WA***					
431	***52865***	***Mr. Moore, D-KS***	✓				
1122	***56616***	***Mr. Weiner, D-NY***	✓				
410	***53011***	***Mr. Matheson, D-UT***	✓				
503	***56131***	***Mr. Cardoza, D-CA***					
		TOTAL	14	19			

Attest: Vivian A. Testerman (Clerk)

AMENDMENT TO H.R. 3970
OFFERED BY MS. EDDIE BERNICE JOHNSON OF TEXAS

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. STUDY ON COMMERCIALIZATION OF GREEN CHEM-**
2 **ISTRY.**

3 (a) STUDY.—The Director of the National Science
4 Foundation shall enter into an arrangement with the Na-
5 tional Research Council to conduct a study of the factors
6 that constitute barriers to the successful commercial appli-
7 cation of promising results from green chemistry research
8 and development.

9 (b) CONTENTS.—The study shall—

10 (1) examine successful and unsuccessful at-
11 tempts at commercialization of green chemistry in
12 the United States and abroad; and

13 (2) recommend research areas and priorities
14 and public policy options that would help to over-
15 come identified barriers to commercialization.

1 (c) REPORT.—The Director shall submit a report to
2 Congress on the findings and recommendations of the
3 study within 18 months after the date of enactment of
4 this Act.

AMENDMENT TO H.R. 3970

OFFERED BY MS. EDDIE BERNICE JOHNSON OF TEXAS

Page 6, line 3, strike "$7,000,000" and insert "$26,000,000".

Page 6, line 4, strike "$7,500,000" and insert "$27,250,000".

Page 6, line 5, strike "$8,000,000" and insert "$28,660,000".

COMMITTEE ON SCIENCE - ROLL CALL – 108th CONGRESS

DATE: 3/31/04 **SUBJECT:** Amendment #6 Offered by Ms. Johnson

Rm.	Phone	Member	Yes	No	Not Voting	Present	Absent
2246	53665	Mr. Boehlert, R-NY		✓			
2405	56673	Mr. Hall, R-TX	✓				
2231	54236	Mr. Lamar Smith, R-TX		✓			
2466	52011	Mr. Weldon, R-PA		✓			
2338	52415	Mr. Rohrabacher, R-CA		✓			
2201	51986	Mr. Calvert, R-CA					
2305	56276	Mr. Nick Smith, R-MI		✓			
2412	52721	Mr. Bartlett, R-MD		✓			
1714	53831	Mr. Ehlers, R-MI		✓			
425	52472	Mr. Gutknecht, R-MN		✓			
2443	52006	Mr. Nethercutt, R-WA					
2342	55565	Mr. Lucas, R-OK		✓			
1213	53515	Mrs. Biggert, R-IL		✓			
2245	55311	Mr. Gilchrest, R-MD		✓			
117	52561	Mr. Akin, R-MO		✓			
1229	52371	Mr. Johnson, R-IL					
1508	52565	Ms. Hart, R-PA		✓			
307	56365	Mr. Forbes, R-VA		✓			
1118	52931	Mr. Gingrey, R-GA		✓			
124	50453	Mr. Bishop, R-UT		✓			
1721	57772	Mr. Burgess, R-TX		✓			
315	54931	Mr. Bonner, R-AL		✓			
323	52706	Mr. Feeney, R-FL		✓			
1026	54005	Mr. Neugebauer, R-TX					
2304	***54231***	***Mr. Gordon, D-TN***	✓				
2454	***55661***	***Mr. Costello, D-IL***	✓				
1511	***58885***	***Ms. Johnson, D-TX***	✓				
2263	***55161***	***Ms. Woolsey, D-CA***	✓				
405	***56565***	***Mr. Lampson, D-TX***	✓				
1005	***52265***	***Mr. Larson, D-CT***	✓				
115	***52161***	***Mr. Udall, D-CO***	✓				
1023	***50855***	***Mr. Wu, D-OR***	✓				
1713	***52631***	***Mr. Honda, D-CA***	✓				
1505	***53032***	***Mr. Miller, D-NC***	✓				
504	***56831***	***Mr. Davis, D-TN***					
2435	***53816***	***Ms. Jackson-Lee, D-TX***	✓				
102	***53072***	***Ms. Lofgren, D-CA***					
1030	***55911***	***Mr. Sherman, D-CA***	✓				
1421	***53536***	***Mr. Baird, D-WA***					
431	***52865***	***Mr. Moore, D-KS***	✓				
1122	***56616***	***Mr. Weiner, D-NY***					
410	***53011***	***Mr. Matheson, D-UT***	✓				
503	***56131***	***Mr. Cardoza, D-CA***					
		TOTAL	15	18			

Attest: Vivian A. Testain (Clerk)

AMENDMENT TO H.R. 3970

OFFERED BY Mr. Honda

Page 4, line 5, strike "; and" and insert a semicolon.

Page 4, line 11, strike the period and insert "; and".

Page 4, after line 11, insert the following new paragraph:

1 (7) ensure that ethical, legal, economic, environ-
2 mental, and other appropriate societal concerns are
3 considered in green chemistry research, development,
4 and commercialization by—
5 (A) supporting research activities focused
6 on such ethical, legal, economic, environmental,
7 and other appropriate societal concerns; and
8 (B) providing for public input and out-
9 reach to be integrated into the Program by the
10 convening by the Interagency Working Group of
11 regular and ongoing public discussions, through
12 mechanisms such as citizen panels, consensus
13 conferences, and educational events, as appro-
14 priate.

AMENDMENT TO H.R. 3970
OFFERED BY MS. JACKSON-LEE OF TEXAS

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. COMMUNITY GREEN CHEMISTRY GRANT PROGRAM.**
2 (a) ESTABLISHMENT.—The Administrator of the En-
3 vironmental Protection Agency shall establish a grant pro-
4 gram to provide technical assistance to communities enter-
5 ing into a cooperative agreement with a local chemical fa-
6 cility for the purposes of identifying opportunities to re-
7 duce the use and release of toxic chemicals.
8 (b) GRANTS FOR TECHNICAL ASSISTANCE.—The Ad-
9 ministrator shall make grants available to any group of
10 individuals which may be affected by the use or release
11 of toxic chemicals associated with a manufacturing facil-
12 ity. Such grants may be used to obtain technical assist-
13 ance in interpreting information with regard to the identi-
14 fication of use and waste reduction opportunities for the
15 facility and the feasibility of implementing changes in
16 manufacturing processes. Grants shall be made only to
17 groups of individuals who have entered into a voluntary

1 cooperative agreement with a local facility. Not more than
2 one grant may be made under this subsection with respect
3 to a single facility.

4 (c) AMOUNTS.—The amount of any grant under this
5 section may not exceed $100,000 for any grant recipient.
6 The Administrator may waive the limitation in any case
7 where the waiver is necessary to carry out the purposes
8 of this section.

9 (d) COST SHARE.—Each grant recipient shall be re-
10 quired to contribute 20 percent of the total costs of the
11 technical assistance for which such grant is made. The Ad-
12 ministrator may waive the 20 percent contribution re-
13 quirement if the grant recipient demonstrates financial
14 need.

AMENDMENT TO H.R. 3970

OFFERED BY MS. JACKSON-LEE OF TEXAS

Page 6, lines 7 and 8, lines 14 and 15, and lines 21 and 22, strike "From sums otherwise authorized to be appropriated, there" and insert "There".

(To be offered on Day 2
of the Markup on H.R. 3970
scheduled for April 1, 2004.)

AMENDMENT TO H.R. 3970

OFFERED BY MS. LOFGREN

Page 4, line 17, insert "the Department of Homeland Security," after "Environmental Protection Agency,".

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. USING GREEN CHEMISTRY TO REDUCE**
2 **VULNERABILITIES TO TERRORISM.**

3 (a) REPORT.—Not later than one year after the date
4 of enactment of this Act, the Administrator of the Envi-
5 ronmental Protection Agency, in consultation with the
6 Secretary of Homeland Security and State and local agen-
7 cies responsible for planning for and responding to unau-
8 thorized releases and providing emergency health care,
9 shall produce a report that—

10 (1) identifies certain chemical substances of
11 concern as high priority categories for replacement
12 with green chemistry alternatives, based on the se-
13 verity of the threat posed by an unauthorized release
14 of such substances;

1 (2) identifies those chemical substances identi-
2 fied under paragraph (1) for which a green chem-
3 istry replacement is currently available; and
4 (3) identifies those chemical substances identi-
5 fied under paragraph (1) for which a green chem-
6 istry substitute is not available, with an indication of
7 where research might most fruitfully be directed to-
8 wards developing substitutes.
9 (b) FACTORS TO BE CONSIDERED.—In developing
10 the report under subsection (a), the Administrator shall
11 consider the following factors for prioritizing chemical
12 sources and substances of concern:
13 (1) The severity of the harm that could be
14 caused by unauthorized release.
15 (2) The proximity to population centers.
16 (3) The threats to national security.
17 (4) The threats to critical infrastructure.
18 (5) Threshold quantities of substances of con-
19 cern that pose a serious threat.
20 (6) Such other safety or security factors as the
21 Administrator, in consultation with the Secretary of
22 Homeland Security, determines to be appropriate.
23 (c) DELIVERY OF REPORT.—The report shall be
24 transmitted to Congress and to the Interagency Working
25 Group. The Interagency Working Group shall include the

1 security considerations contained in the report in estab-
2 lishing goals and priorities for the Program, and shall di-
3 rectly address this issue in the report they transmit to
4 Congress under section 3(d).

AMENDMENT TO H.R. 3970
OFFERED BY MR. BAIRD

Page 4, line 5, strike "; and" and insert a semicolon.

Page 4, line 11, strike the period and insert "; and".

Page 4, after line 11, insert the following new paragraph:

1 (7) support efforts to fight invasive species.

108TH CONGRESS
2D SESSION

H. R. 3970

To provide for the implementation of a Green Chemistry Research and Development Program, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 16, 2004

Mr. GINGREY (for himself, Ms. EDDIE BERNICE JOHNSON of Texas, and Mr. EHLERS) introduced the following bill; which was referred to the Committee on Science

---

A BILL

To provide for the implementation of a Green Chemistry Research and Development Program, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Green Chemistry Research and Development Act of 2004".

SEC. 2. DEFINITIONS.

In this Act—

(1) the term "green chemistry" means chemistry and chemical engineering to design chemical

1 products and processes that reduce or eliminate the
2 use or generation of hazardous substances;
3 (2) the term "Interagency Working Group"
4 means the interagency working group established
5 under section 3(c); and
6 (3) the term "Program" means the Green
7 Chemistry Research and Development Program de-
8 scribed in section 3.

9 **SEC. 3. GREEN CHEMISTRY RESEARCH AND DEVELOPMENT**
10 **PROGRAM.**

11 (a) IN GENERAL.—The President shall establish a
12 Green Chemistry Research and Development Program to
13 promote and coordinate Federal green chemistry research,
14 development, demonstration, education, and technology
15 transfer activities.
16 (b) PROGRAM ACTIVITIES.—The activities of the Pro-
17 gram shall be designed to—
18 (1) provide sustained support for green chem-
19 istry research, development, demonstration, edu-
20 cation, and technology transfer through—
21 (A) merit-reviewed competitive grants to
22 individual investigators and teams of investiga-
23 tors, including, to the extent practicable, young
24 investigators, for research and development;

(B) merit-reviewed competitive grants to fund collaborative university-industry research and development partnerships;

(C) green chemistry research, development, demonstration, and technology transfer conducted at Federal laboratories; and

(D) to the extent practicable, encouragement of consideration of green chemistry in—

(i) the conduct of Federal chemical science and engineering research and development; and

(ii) the solicitation and evaluation of all proposals for chemical science and engineering research and development;

(2) examine methods by which the Federal Government can create incentives for consideration and use of green chemistry processes and products;

(3) facilitate the adoption of green chemistry innovations;

(4) expand education and training of undergraduate and graduate students in green chemistry science and engineering;

(5) collect and disseminate information on green chemistry research, development, and technology transfer, including information on—

1 (A) incentives and impediments to develop-
2 ment and commercialization;
3 (B) accomplishments;
4 (C) best practices; and
5 (D) costs and benefits; and
6 (6) provide venues for outreach and dissemina-
7 tion of green chemistry advances such as symposia,
8 forums, conferences, and written materials in col-
9 laboration with, as appropriate, industry, academia,
10 scientific and professional societies, and other rel-
11 evant groups.
12 (c) INTERAGENCY WORKING GROUP.—The President
13 shall establish an Interagency Working Group, which shall
14 include representatives from the National Science Founda-
15 tion, the National Institute of Standards and Technology,
16 the Department of Energy, the Environmental Protection
17 Agency, and any other agency that the President may des-
18 ignate. The Director of the National Science Foundation
19 and the Assistant Administrator for Research and Devel-
20 opment of the Environmental Protection Agency shall
21 serve as co-chairs of the Interagency Working Group. The
22 Interagency Working Group shall oversee the planning,
23 management, and coordination of the Program. The Inter-
24 agency Working Group shall—

1 (1) establish goals and priorities for the Pro-
2 gram, to the extent practicable in consultation with
3 green chemistry researchers and potential end-users
4 of green chemistry products and processes; and
5 (2) provide for interagency coordination, includ-
6 ing budget coordination, of activities under the Pro-
7 gram.
8 (d) REPORT TO CONGRESS.—Not later than 2 years
9 after the date of enactment of this Act, the Interagency
10 Working Group shall transmit a report to the Committee
11 on Science of the House of Representatives and the Com-
12 mittee on Commerce, Science, and Transportation of the
13 Senate. This report shall include—
14 (1) a summary of federally funded green chem-
15 istry research, development, demonstration, edu-
16 cation, and technology transfer activities, including
17 the green chemistry budget for each of these activi-
18 ties; and
19 (2) an analysis of the progress made toward
20 achieving the goals and priorities for the Program,
21 and recommendations for future program activities.
22 **SEC. 4. AUTHORIZATION OF APPROPRIATIONS.**
23 (a) NATIONAL SCIENCE FOUNDATION.—From sums
24 otherwise authorized to be appropriated, there are author-

1 ized to be appropriated to the National Science Founda-
2 tion for carrying out this Act—
3 (1) $7,000,000 for fiscal year 2005;
4 (2) $7,500,000 for fiscal year 2006; and
5 (2) $8,000,000 for fiscal year 2007.
6 (b) NATIONAL INSTITUTE OF STANDARDS AND
7 TECHNOLOGY.—From sums otherwise authorized to be
8 appropriated, there are authorized to be appropriated to
9 the National Institute of Standards and Technology for
10 carrying out this Act—
11 (1) $5,000,000 for fiscal year 2005;
12 (2) $5,500,000 for fiscal year 2006; and
13 (3) $6,000,000 for fiscal year 2007.
14 (c) DEPARTMENT OF ENERGY.—From sums other-
15 wise authorized to be appropriated, there are authorized
16 to be appropriated to the Department of Energy for car-
17 rying out this Act—
18 (1) $7,000,000 for fiscal year 2005;
19 (2) $7,500,000 for fiscal year 2006; and
20 (3) $8,000,000 for fiscal year 2007.
21 (d) ENVIRONMENTAL PROTECTION AGENCY.—From
22 sums otherwise authorized to be appropriated, there are
23 authorized to be appropriated to the Environmental Pro-
24 tection Agency for carrying out this Act—
25 (1) $7,000,000 for fiscal year 2005;

1 (2) $7,500,000 for fiscal year 2006; and

2 (3) $8,000,000 for fiscal year 2007.

○

SECTION-BY-SECTION ANALYSIS OF H.R. 3970,
GREEN CHEMISTRY RESEARCH AND DEVELOPMENT ACT OF 2004

Sec. I. Short Title

"Green Chemistry Research and Development Act of 2004"

Sec. 2. Definitions

Defines terms used in the text.

Sec. 3. Green Chemistry Research and Development Program

Establishes an interagency research and development (R&D) program to promote and coordinate federal green chemistry research, development, demonstration, education, and technology transfer activities. The program will provide sustained support for green chemistry R&D through merit-reviewed competitive grants to researchers, teams of researchers, and university-industry R&D partnerships, and through R&D conducted at federal laboratories.

The program will provide support for, and encouragement of, the application of green chemistry through encouragement of consideration of green chemistry in all federally-funded chemical science and engineering R&D; examination of methods to create incentives for the use of green chemistry; promotion of the education and training of undergraduate and graduate students in green chemistry; collection and dissemination of information on green chemistry R&D and technology transfer; and provision of venues for outreach and dissemination of green chemistry advances such as symposia, forums, conferences, and written materials.

Establishes an interagency working group composed of representatives from the National Science Foundation, the National Institute for Standards and Technology, the Department of Energy, the Environmental Protection Agency, and any other agency that the President may designate, to oversee the planning, management, and coordination of all federal green chemistry R&D activities. Names the Director of the National Science Foundation and the Assistant Administrator for R&D at the Environmental Protection Agency as co-chairs and requires the group to establish goals and priorities for the program and provide for interagency coordination, including budget coordination. Requires the group to submit a report to the Committee on Science of the House of Representatives and the Committee on Commerce, Science and Transportation of the Senate within two years that includes a summary of federally-funded green chemistry activities and an analysis of the progress made towards the goals and priorities established for the program, including recommendations for future program activities.

Sec. 4. Authorization of Appropriations

Authorizes appropriations for green chemistry R&D programs, from sums already authorized to be appropriated, at the National Science Foundation, the National Institute of Standards and Technology, the Department of Energy, and the Environmental Protection Agency.

Agency	FY05 (millions $)	FY06 (millions $)	FY07 (millions $)
NSF	7	7.5	8
NIST	5	5.5	6
DOE	7	7.5	8
EPA	7	7.5	8
Total	26	28	30

From sums already authorized to be appropriated for each of the agencies.

PROCEEDINGS OF THE CONTINUATION OF THE FULL COMMITTEE MARKUP ON H.R. 3970, GREEN CHEMISTRY RESEARCH AND DEVELOPMENT ACT OF 2004

THURSDAY, APRIL 1, 2004

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC.

The Committee met, pursuant to call, at 10:14 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Sherwood L. Boehlert [Chairman of the Committee] presiding.

Chairman BOEHLERT. Good morning. The Committee on Science will be in order. The Committee meets today to continue consideration of H.R. 3970, *Green Chemistry Research and Development Act of 2004.* I ask unanimous consent for the authority to recess the Committee at any point and without objection, it is so ordered.

The first amendment on the roster is amendment #1, an amendment offered by Ms. Lofgren. Are you ready to proceed?

Ms. LOFGREN. I am, Mr. Chairman.

Chairman BOEHLERT. The Clerk will report the amendment.

The CLERK. Amendment to H.R. 3970, offered by Ms. Lofgren.

[See Appendix for the amendment offered by Ms. Logfren.]

Chairman BOEHLERT. Gentlelady—I ask unanimous consent to dispense with the reading. Without objection, so ordered. The gentlelady is recognized for five minutes to explain her amendment.

Ms. LOFGREN. Mr. Chairman, we are in agreement on both sides of the aisle that green chemistry can have a revolutionary effect in reducing the environmental costs of living in an industrial society.

I want to propose that green chemistry may have a similar effect in reducing security risks to our country as well, and I hope that my colleagues on the other side of the aisle can support my amendment.

Where we rely on traditional chemicals for production, and those chemicals are especially explosive, or toxic, we leave ourselves vulnerable to attack. To the degree green chemistry could give our industries an alternative that would reduce risks, we should be encouraging those moves. We already know that EPA and the Department of Homeland Security are working with the chemical industry to try to produce more on-site security, to reduce stores of the most dangerous chemicals, and to encourage the search for less hazardous alternatives.

However, today we have an opportunity to guarantee that security considerations are also incorporated into the effort to guide research and development and investment decisions. My amendment calls on EPA, in consultation with the Department of Homeland Security, to produce a list of the most hazardous chemicals from the perspective of homeland security.

Then, within a year of passage of this Act, the EPA is to report to Congress and the Interagency Working Group on which dangerous substances do not have a green chemistry option. That information can then be used as a factor by the Interagency Working Group as they produce their plan for a green chemistry research program. That plan is due two years after passage, so the EPA report can be effectively integrated into that plan.

I believe that there is no contradiction between tending to our environment and tending to our security. The two can go hand in hand, in the form of green chemistry, and it seems to me it would be a tragedy if we missed this opportunity to tie security concerns into the planning of the Interagency Working Group.

I hope the Committee will endorse this proposal, and I understand that—some concern, at least at a staff level, may have been expressed that this amendment would trigger a joint referral. I don't believe that is the case. We have clear jurisdiction over DHS R&D, and adding Homeland Security to the interagency panel would not in any way be an issue that would trigger a joint referral.

Further, the language of the bill, as it now stands, is so broad that any agency could be added to the panel at the President's discretion, and adding Homeland Security, an agency whose R&D we have jurisdiction over, merely provides specificity.

The bill itself has enormous reach, and we have included green chemistry research at federal labs that are not actually necessarily limited to the labs under our jurisdiction, and we have included green chemistry in the conduct of federal chemical science and engineering research and development of programs that would also impact DOD, so if there are joint referral concerns, they are already included in the bill, and I am also aware that we frequently, in the Congress, have committees that waive referrals back and forth. That has been done with this committee with a variety of other committees, and I am sure what will have to be done in this case vis-á-vis DOD and others in any case, so I recommend this amendment, and I hope that we can come together and approve it as a group, and I thank the Chairman for the time.

Chairman BOEHLERT. Thank you very much. The Chair will reluctantly oppose the bill, but I have something more to say in a moment, but let me make it clear that we have worked closely with the parliamentarian, and there are no jurisdictional issues with this bill, as presently constituted, and we hope to maintain that.

This amendment would require the Department of Homeland Security and EPA to develop a report identifying the chemicals that pose the greatest threat to national security and green chemistry alternatives. I agree with the gentlelady in the offer of the amendment. Tending to the environment and tending to national security interests are not incompatible, and I would be willing to work with the lady as a co-sponsor of a stand-alone piece, if she would like to do that.

Green chemistry can improve national security. However, this shifts the focus of the bill away from green chemistry R&D, something I think the legislation needs to remain focused on, and it brings up some questions about imposing regulatory issue—bringing up regulatory issues, and I think it most certainly would trig-

ger a sequential referral, which would slow and possibly stop progress on the bill.

So while the idea is valid, I wish to identify with the idea, and I applaud the gentlelady for her initiative, and am willing to work with her as a co-sponsor of her bill, and I would take second position on it, if she so desires, a stand-alone bill to deal with this.

But for those reasons, the Chair opposes the bill, the amendment. We want to get the bill to the Floor without any clouding over dealing with potential jurisdictional issues.

Ms. LOFGREN. Would the Chairman yield for a question?

Chairman BOEHLERT. By all means. I would be glad to.

Ms. LOFGREN. Would the Chairman support a rule that would allow this amendment to be offered on the Floor, since we are in agreement on the substance, and that would avoid the referral issue which is of concern to you?

Chairman BOEHLERT. Well, yes and no, and I hate to give an equivocal answer, but we think, if we do it the way I hope we are able to do it, we will get it on the suspension calendar. We are anxious to get this moving, and at a rapid pace, but that is open to discussion. I would be glad to have serious discussions with the gentlelady on this.

Once again, let me stress, I like the idea, and I agree with you 110 percent that national security issues and tending to environmental issues are not incompatible. We can do both simultaneously.

Is there any further discussion on——

Mr. GORDON. Mr. Chairman, this is probably the fifth or sixth incident where we had an amendment that is pretty universally agreed is a good amendment but was rejected because of potential for referral, and I would make two suggestions how this can easily be taken care of.

One, as Ms. Lofgren suggested, rather than bring this bill as a suspension, I think that we could take it as a regular bill. Now, I know that we have had a hectic pace around here, but I—it looks to me like we could probably work one more bill into this—our activities.

Secondly, let me point out that we have a situation here where there are concerns about referral, and already, this year, in the 108th Congress, this committee has waived its jurisdiction in minor ways, to Transportation twice, to Government Reform, to Resources, and then other committees have waived jurisdiction for our purposes, Resources three times, Armed Services twice, Small Business, Transportation twice. So it is common that when you have a good bill with small types of overlay that what a committee does is you exchange letters, the other committee yes, you know, this is our jurisdiction, and they do that to maintain that jurisdiction, but says go right ahead.

I think that we could, you know, take care of this. We just continue to dumb down a bill when we could really get a good bill that this committee could be pleased with.

Chairman BOEHLERT. Well, thank you very much for that intervention. I appreciate it. One of the reasons this committee waives referral on some of the things is that they are non-controversial, and we see no need to slow the process, but we are—we take an

enlightened approach to this, but when we have asked for waivers from other committees, and there has been any element of potential controversy, the waivers have not been granted. They have been granted by other committees on non-controversial issues.

This raises up a whole new series of questions regarding regulations if this amendment were adopted, and I am willing to work with the gentlelady on a stand alone bill, or if we decide in some way that we can work the leadership, and we are not able to go with a suspension calendar, we have to go another route, then we can be open to potential amendments. But I think it is on, quite frankly, a fast track, because there is universal recognition of the value and importance of green chemistry, and so let us move ahead with this, and get it wrapped up, and then deal with some of the other issues.

And you are absolutely right. The Chair does recognize there are merits—this is merit to a number of the points made by other Members in advancing individual amendments, but when all is said and done, we want to gain support and not risk losing support for something that we have worked closely with a whole bunch of outside players on. We even have the American chemical industry acknowledging the merit of this bill, and signing on.

So, with that, the Chair wishes to know if anyone else seeks recognition. If not, the vote is on the amendment. All in favor say aye. Opposed, no. No. The noes appear to have it, and the amendment is defeated.

Ms. LOFGREN. Mr. Chairman, could we have a recorded vote?

Chairman BOEHLERT. The Clerk will call the roll.

The CLERK. Mr. Boehlert.

Mr. BOEHLERT. No.

The CLERK. Mr. Boehlert votes no. Mr. Hall.

[No response.]

The CLERK. Mr. Lamar Smith.

Mr. SMITH OF TEXAS. No.

The CLERK. Mr. Smith votes no. Mr. Weldon.

[No response.]

The CLERK. Mr. Rohrabacher.

[No response.]

The CLERK. Mr. Calvert.

Mr. CALVERT. No.

The CLERK. Mr. Calvert votes no. Mr. Nick Smith.

Mr. SMITH OF MICHIGAN. No.

The CLERK. Mr. Smith votes no. Mr. Bartlett.

[No response.]

The CLERK. Mr. Ehlers.

Mr. EHLERS. No.

The CLERK. Mr. Ehlers votes no. Mr. Gutknecht.

Mr. GUTKNECHT. No.

The CLERK. Mr. Gutknecht votes no. Mr. Nethercutt.

[No response.]

The CLERK. Mr. Lucas.

Mr. LUCAS. No.

The CLERK. Mr. Lucas votes no. Mrs. Biggert.

[No response.]

The CLERK. Mr. Gilchrest.

Mr. GILCHREST. No.
The CLERK. Mr. Gilchrest votes no. Mr. Akin.
[No response.]
The CLERK. Mr. Johnson.
Mr. JOHNSON. No.
The CLERK. Mr. Johnson votes no. Ms. Hart.
Ms. HART. No.
The CLERK. Ms. Hart votes no. Mr. Forbes.
[No response.]
The CLERK. Mr. Gingrey.
Mr. GINGREY. No.
The CLERK. Mr. Gingrey votes no. Mr. Bishop.
[No response.]
The CLERK. Mr. Burgess.
[No response.]
The CLERK. Mr. Bonner.
[No response.]
The CLERK. Mr. Feeney.
Mr. FEENEY. No.
The CLERK. Mr. Feeney votes no. Mr. Neugebauer.
Mr. NEUGEBAUER. No.
The CLERK. Mr. Neugebauer votes no. Mr. Gordon.
Mr. GORDON. Yes.
The CLERK. Mr. Gordon votes yes. Mr. Costello.
[No response.]
The CLERK. Ms. Johnson.
Ms. JOHNSON. Yes.
The CLERK. Ms. Johnson votes yes. Ms. Woolsey.
Ms. WOOLSEY. Yes.
The CLERK. Ms. Woolsey votes yes. Mr. Lampson.
Mr. LAMPSON. Yes.
The CLERK. Mr. Lampson votes yes. Mr. Larson.
Mr. LARSON. Yes.
The CLERK. Mr. Larson votes yes. Mr. Udall.
[No response.]
The CLERK. Mr. Wu.
Mr. WU. Yes.
The CLERK. Mr. Wu votes yes. Mr. Honda.
Mr. HONDA. Yes.
The CLERK. Mr. Honda votes yes. Mr. Miller.
Mr. MILLER. Aye.
The CLERK. Mr. Miller votes yes. Mr. Davis.
[No response.]
The CLERK. Ms. Jackson Lee.
Ms. JACKSON LEE. Aye.
The CLERK. Ms. Jackson Lee votes yes. Ms. Lofgren.
Ms. LOFGREN. Aye.
The CLERK. Ms. Lofgren votes yes. Mr. Sherman.
[No response.]
The CLERK. Mr. Baird.
Mr. BAIRD. Aye.
The CLERK. Mr. Baird votes yes. Mr. Moore.
Mr. MOORE. Yes.
The CLERK. Mr. Moore votes yes. Mr. Weiner.

[No response.]

The CLERK. Mr. Matheson.

Mr. MATHESON. Aye.

The CLERK. Mr. Matheson votes yes. Mr. Cardoza.

Mr. CARDOZA. Aye.

The CLERK. Mr. Cardoza votes yes.

Chairman BOEHLERT. How is Mr. Bonner recorded?

The CLERK. Mr. Bonner is not recorded, Mr. Chairman.

Mr. BONNER. I vote no.

The CLERK. Mr. Bonner votes no.

Chairman BOEHLERT. How is Mr. Rohrabacher recorded?

The CLERK. Mr. Rohrabacher is not recorded.

Mr. ROHRABACHER. No.

The CLERK. Mr. Rohrabacher votes no.

Chairman BOEHLERT. How is Mr. Udall recorded?

The CLERK. Mr. Udall is not recorded.

Mr. UDALL. Aye.

The CLERK. Mr. Udall votes yes.

Chairman BOEHLERT. And Mr. Larson.

The CLERK. Mr. Larson is voted—is recorded as voting yes.

Chairman BOEHLERT. I just want to make sure my distinguished colleague and good friend from Connecticut is recorded accurately. Thank you very much. Thank you, Mr. Larson. Is there anyone else that seeks recognition? The Clerk will therefore report.

The CLERK. Mr. Chairman, yes 15, no 15.

Chairman BOEHLERT. The amendment is defeated on a tie vote. We will proceed. The second amendment on the roster is amendment #2, an amendment offered by Ms. Jackson Lee. Ms. Lee, are you ready to—Jackson Lee, are you ready to proceed?

Ms. JACKSON LEE. Yes, Mr. Chairman.

Chairman BOEHLERT. The Clerk will report the amendment.

Ms. JACKSON LEE. I have an amendment at the desk.

The CLERK. Amendment to H.R. 3970, offered by Ms. Jackson Lee of Texas.

[See Appendix for the amendment offered by Ms. Jackson Lee.]

Ms. JACKSON LEE. Thank you. Thank you very much, Mr. Chairman, and to the Ranking Member. This is a story retold, but with clarification. I offered this amendment yesterday, and my proposed amendment today serves the same effort, if you will, as the amendment yesterday, to avoid confusion.

Let me just say, Mr. Chairman, that this is a bill that will draw, I believe, a great deal of bipartisan support. It is noteworthy, however, that the fact that the bill was not marked up in subcommittee, and the bill has only been drafted and authorized, or at least presented, in the last 15 days. I am sure that most of us would want to ensure that the language of the bill, the substance of the bill, is fully funded.

This amendment fixes a technical problem in the bill to ensure that our intention to promote green chemistry will actually get funded as intended in H.R. 3970. H.R. 3970 purports to be a bill to strengthen federal planning and coordination of green chemistry research and development into that, and authorize appropriations at four agencies. In each case, the funding agency is couched in language that specifies the amounts provided are from sums other-

wise authorized to be appropriated. That is, the bill does not authorize any new money but carves the amounts from existing statutory authorizations.

This formulation makes some sense for the National Science Foundation, which has a generous authorization of appropriations in place for each year covered by H.R. 3970. However, as I noted yesterday, the other agencies, such as EPA or NIST, have no general authorization bills, aren't currently on the Committee's agenda, and therefore, have no specific authorizations, and therefore, specific appropriations. And final enactment for the DOE authorization appears doubtful.

As a result, H.R. 3970 does not actually provide any funding authorization for three of the four agencies in the bill. It is worse than being silent on funding, because without such language, it would be effectively such sums as may be necessary authorization.

Now, one can speculate that that is consistent with appropriators, and it can be appropriated. It is a technical question. But if this is a very—if this legislation is of importance to us, why not be more distinct and precise in our language? My amendment simply strikes the phrase "from sums otherwise authorized to be appropriated" for DOE, NIST, and EPA. The effect of the amendment is to authorize actual funding for the three agencies to carry out their parts of the green chemistry program.

I think it is a simple technical amendment. It cleans up the bill. It would certainly be more effective, and I would ask my colleagues to be supportive. I would like—Mr. Gingrey, I would like to yield to you. I would like to ask the question, do you know how CBO will score this bill, the one before us?

Chairman BOEHLERT. Let me——

Mr. GINGREY. I am—we are going—I am going to ask counsel to help us on that, Ms. Jackson, if you will hold on just a second. Thank you.

Chairman BOEHLERT. Yeah, let me ask the Chief of Staff, because he has been working with everybody on this, and he is the most knowledgeable. Mr. Goldston.

Mr. GOLDSTON. CBO generally scores bills the same way, regardless of whether it actually says within authorizations, although we negotiate with them, and sometimes, the way—we can come up with ways to phrase it so that it doesn't score as new money, but our assumption is that CBO will score it as $84 million over the next three years.

Ms. JACKSON LEE. And does—and then how will CBO score my amendment? There is no difference. They will likewise score it, and it is more clarified. Is that correct?

Mr. GOLDSTON. I believe that is correct.

Ms. JACKSON LEE. Right. I thank the distinguished counsel. Mr. Chairman, there is my answer. This will provide more clarity to this legislation. The scoring will equal, but the language will be more precise, and therefore, my amendment provides clarity to legislation that is not clear, and I would ask my Republican colleagues to support the amendment, because it is a technical cleanup that I think all of us would appreciate, particularly as legislation is written, we would want our committee to have precise language that distinctly indicates our commitment to this legislation, and

Mr. Gingrey's intent to provide a good roadmap entitled the Green Chemistry Bill, and so I would ask my colleagues to support this amendment, and be at least in support of a clarified statement about our commitment to this legislation. I yield back.

Chairman BOEHLERT. Thank you very much, and essentially, for the same reasons as we articulated yesterday, we are opposing the amendment. The agencies included in the program authorized by this bill already fund chemical science and engineering research, including green chemistry research. Our goal is to authorize a more focused program, and encourage more meaningful interagency coordination, so that we get more bang from the buck from the dollars we are already spending.

The approach to authorize "from sums already authorized to be appropriated" is exactly the approach this committee took—incidentally, at that time, I was in the majority, and fully supported the minority when we passed the High Performance Computing Act in 1991. At the time that the High Performance Computing Act was reported out of committee and passed by the House, not every agency included in the program authorized by the Act was authorized outside of the annual appropriations bills. In particular, neither the Environmental Protection Agency nor the Department of Energy had an existing authorization at that time.

Nonetheless, the *High Performance Computing Act of 1991* was a ringing success, and let me stress once again, at that time, I was fully supportive of the majority sitting in this chair, because they had a good idea and a good approach. I believe that Mr. Gingrey's Green Chemistry Research and Development Act will take its place alongside the High Performance Computing Act as one of this committee's best efforts.

And with that, let me reiterate, I oppose the amendment. Is there anyone else who seeks recognition? If not, the vote is on the amendment. All those in favor, say aye. Opposed, nay. Nay. The nays appear to have it.

Ms. JACKSON LEE. Roll call vote, Mr. Chairman. Roll call.

Chairman BOEHLERT. The Clerk will call the roll.

The CLERK. Mr. Boehlert.

Mr. BOEHLERT. No.

The CLERK. Mr. Boehlert votes no. Mr. Hall.

[No response.]

The CLERK. Mr. Lamar Smith.

Mr. SMITH OF TEXAS. No.

The CLERK. Mr. Smith votes no. Mr. Weldon.

[No response.]

The CLERK. Mr. Rohrabacher.

[No response.]

The CLERK. Mr. Calvert.

Mr. CALVERT. No.

The CLERK. Mr. Calvert votes no. Mr. Nick Smith.

[No response.]

The CLERK. Mr. Bartlett.

[No response.]

The CLERK. Mr. Ehlers.

Mr. EHLERS. No.

The CLERK. Mr. Ehlers votes no. Mr. Gutknecht.

Mr. GUTKNECHT. No.
The CLERK. Mr. Gutknecht votes no. Mr. Nethercutt.
[No response.]
The CLERK. Mr. Lucas.
Mr. LUCAS. No.
The CLERK. Mr. Lucas votes no. Mrs. Biggert.
[No response.]
The CLERK. Mr. Gilchrest.
Mr. GILCHREST. No.
The CLERK. Mr. Gilchrest votes no. Mr. Akin.
Mr. AKIN. No.
The CLERK. Mr. Akin votes no. Ms.—Mr. Johnson.
Mr. JOHNSON. No.
The CLERK. Mr. Johnson votes no. Ms. Hart.
Ms. HART. No.
The CLERK. Ms. Hart votes no. Mr. Forbes.
Mr. FORBES. No.
The CLERK. Mr. Forbes votes no. Mr. Gingrey.
Mr. GINGREY. No.
The CLERK. Mr. Gingrey votes no. Mr. Bishop.
Mr. BISHOP. No.
The CLERK. Mr. Bishop votes no. Mr. Burgess.
[No response.]
The CLERK. Mr. Bonner.
Mr. BONNER. No.
The CLERK. Mr. Bonner votes no. Mr. Feeney.
Mr. FEENEY. No.
The CLERK. Mr. Feeney votes no. Mr. Neugebauer.
Mr. NEUGEBAUER. No.
The CLERK. Mr. Neugebauer votes no. Mr. Gordon.
Mr. GORDON. Aye.
The CLERK. Mr. Gordon votes yes. Mr. Costello.
[No response.]
The CLERK. Mr.—Ms. Johnson.
Ms. JOHNSON. Yes.
The CLERK. Ms. Johnson votes yes. Ms. Woolsey.
Ms. WOOLSEY. Aye.
The CLERK. Ms. Woolsey votes yes. Mr. Lampson.
Mr. LAMPSON. Yes.
The CLERK. Mr. Lampson votes yes. Mr. Larson.
Mr. LARSON. Yes.
The CLERK. Mr. Larson votes yes. Mr. Udall.
Mr. UDALL. Aye.
The CLERK. Mr. Udall votes yes. Mr. Wu.
Mr. WU. Aye.
The CLERK. Mr. Wu votes yes. Mr. Honda.
Mr. HONDA. Aye.
The CLERK. Mr. Honda votes yes. Mr. Miller.
Mr. MILLER. Aye.
The CLERK. Mr. Miller votes yes. Mr. Davis.
Mr. DAVIS. Yes.
The CLERK. Mr. Davis votes yes. Ms. Jackson Lee.
Ms. JACKSON LEE. Aye.
The CLERK. Ms. Jackson Lee votes yes. Ms. Lofgren.

Ms. LOFGREN. Aye.
The CLERK. Ms. Lofgren votes yes. Mr. Sherman.
[No response.]
The CLERK. Mr. Baird.
Mr. BAIRD. Aye.
The CLERK. Mr. Baird votes yes. Mr. Moore. Mr. Weiner.
Mr. MOORE. Yes.
The CLERK. Mr. Moore votes yes. Mr. Weiner.
[No response.]
The CLERK. Mr. Matheson.
Mr. MATHESON. Aye.
The CLERK. Mr. Matheson votes yes. Mr. Cardoza.
Mr. CARDOZA. Aye.
The CLERK. Mr. Cardoza votes yes.
Chairman BOEHLERT. Clerk, how is Dr. Bartlett recorded?
The CLERK. Mr. Chairman, Mr. Bartlett is not recorded.
Mr. BARTLETT. No.
The CLERK. Mr. Bartlett votes no.
Chairman BOEHLERT. How is Mr. Rohrabacher recorded?
The CLERK. Mr. Rohrabacher is not recorded?
Mr. ROHRABACHER. No.
The CLERK. Mr. Rohrabacher votes no.
Chairman BOEHLERT. How is Mr. Smith of Michigan recorded?
The CLERK. Mr. Smith of Michigan is not recorded.
Chairman BOEHLERT. Mr. Smith of Michigan. The Clerk will report.
The CLERK. Mr. Chairman, yes 16, no 19.
Chairman BOEHLERT. And the motion is defeated. Are there any other amendments? Hearing none——
Mr. GORDON. Mr. Chairman, I——
Chairman BOEHLERT. Mr. Gordon.
Mr. GORDON. Strike the last word.
Chairman BOEHLERT. The gentleman is recognized.
Mr. GORDON. Quickly, Mr. Chairman, let me just—I want to compliment you and your staff for the consultation and constructive way you approached the National Windstorm Reduction Act. I think that we—it resulted in a bill of which this committee can be proud.

I just wish it could have been a model for the Green Chemistry Act. This is an important bill, but we simply did not maximize, I think, the work that this committee could do and should have done. Quoting the legendary legislative scholar Orson Welles, "No wine before its time," this bill simply isn't mature. We had one hearing, most all of the minority amendments came out of that hearing. They were uncontradicted suggestions from the panel, and we made an effort to try to make this bill better.

You know, I think a good idea is a good idea. Mr. Gingrey had a good idea in bringing the green chemistry here. I think there were some good ideas that could have made it better. It is disappointing that we did not do that. With that said, I know that you have told us that there will be an effort to try to have a manager's technical correction bill before this goes to the Floor, and I just—I hope we don't get in the same rush, because I know we are going

to try to put this thing up quickly. Let us don't wait until the day before the suspension to work on it.

Again, I say that in a constructive way. I am going to vote for this bill. That is one of the reasons, I guess, we have a Senate to maybe clean it up some, and we will have a conference to try to also make it a little bit better, but thank you, Mr. Chairman.

Chairman BOEHLERT. Thank you very much, Mr. Gordon, and I want to particularly thank you for your kind words and positive comments on the manner in which we handled the first bill. I will take as constructive criticism your comments on the bill pending, and I will commit to you a continued effort on the part of our side to work constructively and positively with you on all the bills, not just a select number of bills, and I would further conceded that there is always room for improvement in our performance, and we will strive to improve.

But what we are trying to do is get this bill through. It is a good idea. It is in its infant stages, and we are trying to produce a product that ultimately we can all be proud of. So, thank you very much, and with that, hearing no further amendments, the question now is on the bill H.R. 3970, the *Green Chemistry Research and Development Act of 2004* as amended. All in favor say aye. Opposed, no. In the opinion of the Chair, the ayes have it. The ayes have it, and the—now recognize Mr. Gordon to offer a motion.

Mr. GORDON. Mr. Chairman, I move that the Committee favorably report H.R. 3970 as amended to the House with the recommendation that the bill as amended do pass.

Furthermore, I move that staff be instructed to prepare the legislative report and make necessary technical and conforming changes, and that the Chairman take all necessary steps to bring the bill before the house for consideration.

Chairman BOEHLERT. The question is on the motion to report the bill favorably. Those in favor of the motion will signify it by saying aye. Aye. Opposed, no. The ayes appear to have it, and the bill is favorably reported.

Without objection, the motion to reconsider is laid upon the table. I move that Members have two subsequent calendar days in which to submit supplemental, minority, or additional views on the measure.

I move pursuant to Clause 1 of Rule 22 of the House—Rules of the House of Representatives that the Committee authorize the Chairman to offer such motions as may be necessary in the House to adopt and pass H.R. 3970 as amended, and to go to conference with the Senate on H.R. 3970, or a similar Senate bill.

Without objection, so ordered. Now, this concludes our committee markup, and I want to thank both sides for their indulgence, for working positively and constructively, and the meeting is now over. And thanks.

[Whereupon, at 10:43 a.m., the Committee was adjourned.]

Appendix, April 1, 2004:

Amendment Roster

COMMITTEE ON SCIENCE - FULL COMMITTEE MARKUP

APRIL 1, 2004

AMENDMENT ROSTER

H.R. 3970, Green Chemistry Research and Development Act of 2004

--Motion to adopt the bill, as amended: agreed to by a voice vote.
--Motion to report the bill, as amended: agreed to by a voice vote.

No.	Sponsor	Description	Results
1.	Ms. Lofgren	Amendment on using green chemistry to reduce vulnerabilities to terrorism.	--Defeated by a roll call vote: Y-15; N-15.
2.	Ms. Jackson Lee	Amendment would delete references to "sums otherwise authorized to be appropriated".	--Defeated by a roll call vote: Y-16; N-19.

AMENDMENT TO H.R. 3970

OFFERED BY MS. LOFGREN

Page 4, line 17, insert "the Department of Homeland Security," after "Environmental Protection Agency,".

Page 5, line 22, redesignate section 4 as section 5.

Page 5, after line 21, insert the following new section:

1 **SEC. 4. USING GREEN CHEMISTRY TO REDUCE**
2 **VULNERABILITIES TO TERRORISM.**
3 (a) REPORT.—Not later than one year after the date
4 of enactment of this Act, the Administrator of the Envi-
5 ronmental Protection Agency, in consultation with the
6 Secretary of Homeland Security and State and local agen-
7 cies responsible for planning for and responding to unau-
8 thorized releases and providing emergency health care,
9 shall produce a report that—
10 (1) identifies certain chemical substances of
11 concern as high priority categories for replacement
12 with green chemistry alternatives, based on the se-
13 verity of the threat posed by an unauthorized release
14 of such substances;

1 (2) identifies those chemical substances identi-
2 fied under paragraph (1) for which a green chem-
3 istry replacement is currently available; and
4 (3) identifies those chemical substances identi-
5 fied under paragraph (1) for which a green chem-
6 istry substitute is not available, with an indication of
7 where research might most fruitfully be directed to-
8 wards developing substitutes.
9 (b) FACTORS TO BE CONSIDERED.—In developing
10 the report under subsection (a), the Administrator shall
11 consider the following factors for prioritizing chemical
12 sources and substances of concern:
13 (1) The severity of the harm that could be
14 caused by unauthorized release.
15 (2) The proximity to population centers.
16 (3) The threats to national security.
17 (4) The threats to critical infrastructure.
18 (5) Threshold quantities of substances of con-
19 cern that pose a serious threat.
20 (6) Such other safety or security factors as the
21 Administrator, in consultation with the Secretary of
22 Homeland Security, determines to be appropriate.
23 (c) DELIVERY OF REPORT.—The report shall be
24 transmitted to Congress and to the Interagency Working
25 Group. The Interagency Working Group shall include the

1 security considerations contained in the report in estab-
2 lishing goals and priorities for the Program, and shall di-
3 rectly address this issue in the report they transmit to
4 Congress under section 3(d).

COMMITTEE ON SCIENCE - ROLL CALL – 108th CONGRESS

DATE: 4/1/04 **SUBJECT:** Amendment #1 Offered by Ms. Lofgren

Rm.	Phone	Member	Yes	No	Not Voting	Present	Absent
2246	53665	Mr. Boehlert, R-NY		✓			
2405	56673	Mr. Hall, R-TX		✓			
2231	54236	Mr. Lamar Smith, R-TX		✓			
2466	52011	Mr. Weldon, R-PA					
2338	52415	Mr. Rohrabacher, R-CA		✓			
2201	51986	Mr. Calvert, R-CA		✓			
2305	56276	Mr. Nick Smith, R-MI		✓			
2412	52721	Mr. Bartlett, R-MD		✓			
1714	53831	Mr. Ehlers, R-MI		✓			
425	52472	Mr. Gutknecht, R-MN		✓			
2443	52006	Mr. Nethercutt, R-WA		✓			
2342	55565	Mr. Lucas, R-OK		✓			
1213	53515	Mrs. Biggert, R-IL					
2245	55311	Mr. Gilchrest, R-MD		✓			
117	52561	Mr. Akin, R-MO					
1229	52371	Mr. Johnson, R-IL		✓			
1508	52565	Ms. Hart, R-PA		✓			
307	56365	Mr. Forbes, R-VA					
1118	52931	Mr. Gingrey, R-GA		✓			
124	50453	Mr. Bishop, R-UT					
1721	57772	Mr. Burgess, R-TX					
315	54931	Mr. Bonner, R-AL		✓			
323	52706	Mr. Feeney, R-FL		✓			
1026	54005	Mr. Neugebauer, R-TX		✓			
2304	***54231***	***Mr. Gordon, D-TN***	✓				
2454	***55661***	***Mr. Costello, D-IL***					
1511	***58885***	***Ms. Johnson, D-TX***	✓				
2263	***55161***	***Ms. Woolsey, D-CA***	✓				
405	***56565***	***Mr. Lampson, D-TX***	✓				
1005	***52265***	***Mr. Larson, D-CT***	✓				
115	***52161***	***Mr. Udall, D-CO***	✓				
1023	***50855***	***Mr. Wu, D-OR***	✓				
1713	***52631***	***Mr. Honda, D-CA***	✓				
1505	***53032***	***Mr. Miller, D-NC***	✓				
504	***56831***	***Mr. Davis, D-TN***					
2435	***53816***	***Ms. Jackson-Lee, D-TX***	✓				
102	***53072***	***Ms. Lofgren, D-CA***	✓				
1030	***55911***	***Mr. Sherman, D-CA***					
1421	***53536***	***Mr. Baird, D-WA***	✓				
431	***52865***	***Mr. Moore, D-KS***	✓				
1122	***56616***	***Mr. Weiner, D-NY***					
410	***53011***	***Mr. Matheson, D-UT***	✓				
503	***56131***	***Mr. Cardoza, D-CA***	✓				
		TOTAL	15	15			

Attest: Vivian A. Testani (Clerk)

AMENDMENT TO H.R. 3970

OFFERED BY MS. JACKSON-LEE OF TEXAS

Page 6, line 6 through page 7, line 2, amend subsections (b), (c), and (d) to read as follows:

1 (b) NATIONAL INSTITUTE OF STANDARDS AND
2 TECHNOLOGY.—There are authorized to be appropriated
3 to the National Institute of Standards and Technology for
4 carrying out this Act—
5 (1) $5,000,001 for fiscal year 2005;
6 (2) $5,500,001 for fiscal year 2006; and
7 (3) $6,000,001 for fiscal year 2007.
8 (c) DEPARTMENT OF ENERGY.—There are author-
9 ized to be appropriated to the Department of Energy for
10 carrying out this Act—
11 (1) $7,000,001 for fiscal year 2005;
12 (2) $7,500,001 for fiscal year 2006; and
13 (3) $8,000,001 for fiscal year 2007.
14 (d) ENVIRONMENTAL PROTECTION AGENCY.—There
15 are authorized to be appropriated to the Environmental
16 Protection Agency for carrying out this Act—
17 (1) $7,000,001 for fiscal year 2005;
18 (2) $7,500,001 for fiscal year 2006; and
19 (3) $8,000,001 for fiscal year 2007.

COMMITTEE ON SCIENCE - ROLL CALL – 108th CONGRESS

DATE: 4/1/04 **SUBJECT:** Amendment #2 Offered by Ms. Jackson Lee

Rm.	Phone	Member	Yes	No	Not Voting	Present	Absent
2246	53665	Mr. Boehlert, R-NY		✓			
2405	56673	Mr. Hall, R-TX					
2231	54236	Mr. Lamar Smith, R-TX		✓			
2466	52011	Mr. Weldon, R-PA					
2338	52415	Mr. Rohrabacher, R-CA		✓			
2201	51986	Mr. Calvert, R-CA		✓			
2305	56276	Mr. Nick Smith, R-MI		✓			
2412	52721	Mr. Bartlett, R-MD		✓			
1714	53831	Mr. Ehlers, R-MI		✓			
425	52472	Mr. Gutknecht, R-MN		✓			
2443	52006	Mr. Nethercutt, R-WA					
2342	55565	Mr. Lucas, R-OK		✓			
1213	53515	Mrs. Biggert, R-IL					
2245	55311	Mr. Gilchrest, R-MD		✓			
117	52561	Mr. Akin, R-MO		✓			
1229	52371	Mr. Johnson, R-IL		✓			
1508	52565	Ms. Hart, R-PA		✓			
307	56365	Mr. Forbes, R-VA		✓			
1118	52931	Mr. Gingrey, R-GA		✓			
124	50453	Mr. Bishop, R-UT		✓			
1721	57772	Mr. Burgess, R-TX					
315	54931	Mr. Bonner, R-AL		✓			
323	52706	Mr. Feeney, R-FL		✓			
1026	54005	Mr. Neugebauer, R-TX		✓			
2304	***54231***	***Mr. Gordon, D-TN***	✓				
2454	***55661***	***Mr. Costello, D-IL***					
1511	***58885***	***Ms. Johnson, D-TX***	✓				
2263	***55161***	***Ms. Woolsey, D-CA***	✓				
405	***56565***	***Mr. Lampson, D-TX***	✓				
1005	***52265***	***Mr. Larson, D-CT***	✓				
115	***52161***	***Mr. Udall, D-CO***	✓				
1023	***50855***	***Mr. Wu, D-OR***	✓				
1713	***52631***	***Mr. Honda, D-CA***	✓				
1505	***53032***	***Mr. Miller, D-NC***	✓				
504	***56831***	***Mr. Davis, D-TN***	✓				
2435	***53816***	***Ms. Jackson-Lee, D-TX***	✓				
102	***53072***	***Ms. Lofgren, D-CA***	✓				
1030	***55911***	***Mr. Sherman, D-CA***					
1421	***53536***	***Mr. Baird, D-WA***	✓				
431	***52865***	***Mr. Moore, D-KS***	✓				
1122	***56616***	***Mr. Weiner, D-NY***					
410	***53011***	***Mr. Matheson, D-UT***	✓				
503	***56131***	***Mr. Cardoza, D-CA***	✓				
		TOTAL	16	19			

Attest: Vernon A. Dennis (Clerk)