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105TH CONGRESS
1st Session
HOUSE OF REPRESENTATIVES
REPT. 105–60
Part 2

AMENDING SECTION 2118 OF THE ENERGY POLICY ACT OF 1992 TO EXTEND THE ELECTRIC AND MAGNETIC FIELDS RESEARCH AND PUBLIC INFORMATION DISSEMINATION PROGRAM

APRIL 21, 1997.—Ordered to be printed

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

R E P O R T

[To accompany H.R. 363]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 363) to amend section 2118 of the Energy Policy Act of 1992 to extend the Electric and Magnetic Fields Research and Public Information Dissemination program, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

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I. AMENDMENT

The amendment is as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. AMENDMENTS.

Section 2118 of the Energy Policy Act of 1992 (42 U.S.C. 13478) is amended—

(1) in subsections (c)(5), (e)(5), (g)(3)(B), (j)(1), and (l) by striking "1997" each place it appears and inserting in lieu thereof "1998"; and

(2) in subsection (j)(1), by striking "$65,000,000" and inserting in lieu thereof "$46,000,000".

II. PURPOSE OF THE BILL

The purpose of H.R. 363 is to amend the Energy Policy Act of 1992 (EPACT) to extend through 1998 the Electric and Magnetic Fields (EMF) Research and Public Information Dissemination (RAPID) Program, along with corresponding deadlines for the submission of certain reports concerning the extent to which exposure to EMF produced by the generation, transmission, and use of electric energy affects human health.

III. BACKGROUND AND NEED FOR THE LEGISLATION

Society is highly dependent on electricity and electricity-driven devices. Use of electricity is so widespread that it is impossible to avoid exposure to the EMF produced in the generation and transmission of electric power or to those fields generated by devices used in the homes and workplaces.

While the hazard due to shocks and burns from coming into contact with electric conductors has been known since the first application of electric current, there have also been concerns about the possible health effects of exposure to EMF. These concerns first arose when military personnel were exposed to relatively high-strength fields from high-frequency radar systems during World War II. And since the late 1970's, public attention has focused on possible adverse health effects of exposure to EMF associated with the 50-60 Hertz power systems used throughout the world. Several studies, dating back to 1979, have reported epidemiological data

suggesting an association between the configuration of power lines near homes and the incidence of leukemia and other types of childhood cancer. While the reported associations are generally weak and the suggested causality highly uncertain, reports of these studies in the popular media have heightened public concern, which in turn has been the driving force in setting research agendas for the study of EMF by government agencies and private organizations.

Section 2118 of the EPACT (33 U.S.C. 13478), enacted in 1992, directed the Secretary of Energy to establish a 5-year, cost-shared program—the EMF RAPID Program—starting on October 1, 1992 and expiring on December 31, 1997. The EMF RAPID Program objectives are to: (1) determine whether or not exposure to EMF produced by the generation, transmission, and use of electric energy affects human health; (2) carry out research, development, and demonstration with respect to technologies to mitigate any adverse human health effects; and (3) provide for the dissemination of scientifically-valid information to the public. Under the Act, the Department of Energy (DOE) and the Department of Health and Human Services' National Institute of Environmental Health Sciences (NIEHS) are jointly responsible for directing the Program. DOE has responsibility for the research, development, and demonstration of technologies to improve the measurement and characterization of EMF and for assessing and managing exposure to EMF, while NIEHS has sole responsibility for research on possible human health effects of EMF. EPACT also authorizes $65.0 million for the period encompassing Fiscal Years 1993 through 1997. At least 50 percent ($32.5 million) of the total authorized funding must come from non-federal sources, and before the federal funds can be expended in any fiscal year they must be matched by non-federal contributions. In addition, not more than $1.0 million annually may be spent for the collection, compilation, publication, and dissemination of scientifically-valid information.

The Act also established two advisory committees to help guide the Program: (1) the Electric and Magnetic Fields Interagency Committee (EMFIAC), comprised of nine members, each representing a separate federal agency (DOE, NIEHS, Environmental Protection Agency, Department of Defense, Occupational Safety and Health Administration, National Institute of Standards and Technology, Department of Transportation, Rural Electrification Administration, and Federal Energy Regulatory Commission); and (2) the National Electric and Magnetic Fields Advisory Committee (NEMFAC), a ten-member body, comprised of EMF experts and representatives of State regulatory and health agencies, electric utilities, electric equipment manufacturers, labor unions and the public. Under the Act, both these Committees terminate no later than December 31, 1997.

Finally, the EPACT establishes a number of reporting requirements, including the following:

- By March 31, 1997, the Director of the NIEHS is to report to the EMFIAC and to Congress his or her findings and conclusions on the extent to which exposure to EMF affects human health.
- Not later than September 30, 1997, the EMFIAC, in consultation with the NEMFAC, is to report to the Secretary of Energy and to Congress on its findings and conclusions on the effects, if

any, of EMF on human health and remedial actions, if any, that may be needed to minimize any such health effects.

- Periodically, the National Academy of Sciences is to submit reports to the EMFIAC and NEMFAC that evaluate the research activities under the Program and make recommendations to promote the effective transfer of information derived from such research projects.

Although the Act authorized the EMF RAPID Program to begin in Fiscal Year 1993, no funds were appropriated because the 1993 Energy and Water Development Appropriation Bill was enacted before EPACT. Consequently, the first year of available appropriations was Fiscal Year 1994. In 1996, DOE submitted legislation to extend the EPACT authority for the EMF RAPID Program through 1998, and former Science Committee Chairman Walker (R-PA) introduced this proposal as H.R. 4013 in the 104th Congress. However, the 104th Congress adjourned sine die without taking action on that measure.

The President's Fiscal Year 1998 budget request contains funding for the fifth and final year of the EMF RAPID program and completion of the DOE's long-term commitment to EMF research. As noted in the Summary of Hearings section below, the DOE continues to believe a 1-year extension is appropriate in the interest of completing the work contemplated by the EPACT, and the DOE and non-federal participants testified that a total authorization of $46.0 million will be sufficient to complete the 5-year effort.

IV. Summary of Hearings

The Subcommittee held a hearing on March 19, 1997, and heard testimony on H.R. 363 from three witnesses: (1) the Honorable Christine Ervin, DOE's Assistant Secretary for Energy Efficiency and Renewable Energy; (2) Dr. Paul Gilman, Executive Director, Commission on Life Sciences, National Research Council (NRC); and (3) Mr. Charles J. Boeggeman, PE, Senior Engineer, Power Delivery, PECO Energy Company, Philadelphia, Pennsylvania, and chair of the Edison Electric Institute (EEI) EMF Task Force, on behalf of EEI, PECO Energy Company, the American Public Power Association, the National Rural Electric Cooperative Association, and the National Electrical Manufacturers Association.

Ms. Ervin testified that the President's Fiscal Year 1998 budget request contains $8.0 million in funding "for the fifth and final year of the RAPID program and completion of the Department's long-term commitment to EMF research." She also noted that the "Department previously has submitted legislation to extend the EPACT authority for the RAPID program through 1998, and we were pleased that the proposal was introduced as H.R. 4013 in the 104th Congress." And she concluded by stating that the "Department continues to believe a 1-year extension is appropriate in the interest of completing the work contemplated by the EPACT," and that a total authorization of $46.0 million "will be sufficient to complete the 5-year effort."

Dr. Gilman discussed two NRC studies: (1) *Possible Health Effects of Exposure to Residential Electric and Magnetic Fields,* published in 1997; and (2) *EMF Research Activities Completed Under*

the Energy Policy Act of 1992 [Interim Report 1995], the first report of the NRC's activity to monitor the EMF-RAPID Program research activities.

The first study, *Possible Health Effects of Exposure to Residential Electric and Magnetic Fields,* is the result of nearly 3 years of study by a 16-member NRC panel to review and evaluate the literature on possible adverse health effects resulting from exposure to residential EMF. The panel, which examined more than 500 peer-reviewed studies dating back to 1979, concluded that "the current body of evidence does not show that exposure to these fields presents a human health hazard. Specifically, no conclusive and consistent evidence shows that exposures to residential electric and magnetic fields produce cancer, adverse neurobehavioral effects, or reproductive and developmental effects." Dr. Gilman did note that the panel found "that within current funding a number of questions that remain unanswered by the research reviewed could be the subject of further research. The most important of those questions is the reason for the association between wire codes and increased cancer risk."

The second study, *EMF Research Activities Completed Under the Energy Policy Act of 1992 [Interim Report 1995],* is the first report of the NRC's activity to monitor the EMF-RAPID Program research activities. The report found that: (1) a "great deal of care" had gone into the development of the research strategy for the EMF-RAPID program, and no glaring omissions could be identified; (2) the research strategy was consistent with the stated program goal; (3) extension of the program until 1999 would be needed to complete the planned research because of the significant delay in making the first research grant.

Mr. Boeggeman testified in support of a 1-year extension in the program authority and funding authorization for the EMF RAPID Program. "Such an extension," he said, "will ensure that the RAPID Program can function and receive authorized funding for a full 5 years, as originally intended by Congress in the Energy Policy Act of 1992 (EPAct, Section 2118), and that the program is successfully completed." He noted that, as of Fiscal Year 1996, $14 million of the EMF RAPID Program's funding has come from non-federal matching contributions from all sectors of the electric utility industry, from electrical manufacturers, and from the realty industry. Finally, Mr. Boeggeman projected that a full 5-year EMF RAPID Program will cost about one-third less than the amount originally authorized—$46.0 million rather than $65.0 million.

V. Committee Actions

Representative Edolphus Towns (D-NY) introduced H.R. 363 on January 7, 1997. The bill was referred to the Committee on Commerce, and to the Committee on Science on January 7, 1997. Within the Science Committee, the bill was referred to the Subcommittee on Energy and Environment on February 10, 1997.

Subcommittee Actions

The Subcommittee on Energy and Environment held a hearing on March 19, 1997, and heard testimony on the bill from three witnesses: (1) the Honorable Christine Ervin, Assistant Secretary for

Energy Efficiency and Renewable Energy, U.S. Department of Energy; (2) Dr. Paul Gilman, Executive Director, Commission on Life Sciences, NRC; and (3) Mr. Charles J. Boeggeman, PE, Senior Engineer, Power Delivery, PECO Energy Company, Philadelphia, Pennsylvania, and chair of the EEI EMF Task Force, on behalf of EEI, PECO Energy Company, the American Public Power Association, the National Rural Electric Cooperative Association, and the National Electrical Manufacturers Association.

The Subcommittee on Energy and Environment convened to mark H.R. 363 on April 9, 1997. Mr. Calvert, Chairman of the Subcommittee, and Mr. Roemer, Ranking Democratic Member of the Subcommittee, offered an amendment in the nature of a substitute to H.R. 363, to be used in lieu of the bill for markup purposes. The amendment was adopted by voice vote. With a quorum present, Mr. Roemer moved the bill, as amended, for further consideration by the Committee on Science. The motion was also approved by voice vote.

Committee Actions

The Full Science Committee met on April 16, 1997, to consider H.R. 363, as reported by the Subcommittee on Energy and Environment on April 9, 1997, and adopted the Subcommittee's amendment by voice vote.

With a quorum present, Mr. Roemer moved that the Committee report the bill, H.R. 363, as amended, to the House and that the staff prepare the legislative report and make technical and conforming changes, and that the Chairman take all necessary steps to bring the bill before the House for consideration. The motion was approved by voice vote.

Mr. Sensenbrenner, Chairman of the Science Committee, asked and received unanimous consent that Committee members have 2 subsequent calendar days in which to submit supplemental, minority or additional views on the measure, and that, pursuant to Clause 1 of Rule XX of the Rules of the House of Representatives, the Committee authorize the Chairman to offer such motions as may be necessary in the House to go to conference with the Senate on H.R. 363 or a similar Senate bill.

VI. Summary of Major Provisions of the Bill

H.R. 363, to amend section 2118 of the Energy Policy Act of 1992 to extend the Electric and Magnetic Fields Research and Public Information Dissemination Program, amends the EPACT as follows:

- Extends the EMF RAPID Program, the EMFIAC, and the NEMFAC termination dates by 1 year (from December 31, 1997 to December 31, 1998).
- Extends the deadline of the Director of the NIEHS's report to the EMFIAC and to Congress by 1 year (from March 31, 1997 to March 31, 1998).
- Extends the deadline of the EMFIAC's report to the Secretary of Energy and to Congress by 1 year (from September 30, 1997 to September 30, 1998).
- Reduces the total EMF RAPID Program 5-year authorization from $65.0 million to $46.0 million.

VII. Section-by-Section Analysis

Section 1. Amendments

Section 1 amends Section 2118 of EPACT by extending by 1 year: (1) the EMF RAPID Program, the EMFIAC, and the NEMFAC termination dates (from December 31, 1997 to December 31, 1998); (2) the deadline of the Director of the NIEHS's report to the EMFIAC and to Congress (from March 31, 1997 to March 31, 1998); and (3) the deadline of the EMFIAC's report to the Secretary of Energy and to Congress (from September 30, 1997 to September 30, 1998).

Finally, Section 1 reduces the total EMF RAPID Program 5-year authorization from $65.0 million to $46.0 million, consistent with the testimony by the DOE and the non-federal participants on the funding requirements needed to complete the Program.

VIII. Committee Cost Estimate

Clause 7(a) of rule XIII of the Rules of the House of Representatives requires each committee report accompanying each bill or joint resolution of a public character to contain: (1) an estimate, made by such Committee, of the costs which would be incurred in carrying out such bill or joint resolution in the fiscal year in which it is reported, and in each of the 5 fiscal years following such fiscal year (or for the authorized duration of any program authorized by such bill or joint resolution, if less than 5 years); (2) a comparison of the estimate of costs described in subparagraph (1) of this paragraph made by such Committee with an estimate of such costs made by any government agency and submitted to such Committee; and (3) when practicable, a comparison of the total estimated funding level for the relevant program (or programs) with the appropriate levels under current law. However, clause 7(d) of that rule provides that this requirement does not apply when a cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 403 of the Congressional Budget Act of 1974 has been timely submitted prior to the filing of the report and included in the report pursuant to clause 2(l)(3)(C) of rule XI. A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 403 of the Congressional Budget Act of 1974 has been timely submitted prior to the filing of this report and included in Section IX of this report pursuant to clause 2(l)(3)(C) of rule XI.

Clause 2(l)(3)(B) of rule XI of the Rules of the House of Representatives requires each committee report that accompanies a measure providing new budget authority (other than continuing appropriations), new spending authority, or new credit authority, or changes in revenues or tax expenditures to contain a cost estimate, as required by section 308(a)(1) of the Congressional Budget Act of 1974 and, when practicable with respect to estimates of new budget authority, a comparison of the total estimated funding level for the relevant program (or programs) to the appropriate levels under current law. H.R. 363 does not contain any new budget authority, credit authority, or changes in revenues or tax expenditures. Assuming that the sums authorized under the bill are appropriated, H.R. 363 does authorize additional discretionary spending, as de-

scribed in the Congressional Budget Office report on the bill, which is contained in Section IX of this report.

IX. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

CONGRESSIONAL BUDGET OFFICE
U.S. CONGRESS
WASHINGTON, DC. 20515
JUNE E. O'NEILL, DIRECTOR
April 17, 1997

Honorable F. James Sensenbrenner, Jr.,
Chairman, Committee on Science,
U.S. House of Representatives,
Washington, DC. 20515

DEAR MR. CHAIRMAN:

The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 363, a bill to amend section 2118 of the Energy Policy Act of 1992 to extend the Electric and Magnetic Fields Research and Public Information Dissemination Program.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Kathleen Gramp, who can be reached at 226-2860.

Sincerely,

JUNE E. O'NEILL, *Director*

Enclosure

cc: Honorable George E. Brown, Jr., Ranking Minority Member

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

APRIL 17, 1997

H.R. 363

A BILL TO AMEND SECTION 2118 OF THE ENERGY POLICY ACT OF 1992 TO EXTEND THE ELECTRIC AND MAGNETIC FIELDS RESEARCH AND PUBLIC INFORMATION DISSEMINATION PROGRAM

As ordered reported by the House Committee on Science on April 16, 1997

SUMMARY

H.R. 363 would extend and modify the authorization for a multiyear initiative focused on the health effects of electric and magnetic fields. This interagency research effort, which is funded jointly with the private sector, is administered by the Department of Energy (DOE). The current authorization allows the appropriation of up to $65 million over a multiyear period ending in 1997, provided that nonfederal sources match the federal funds. Since the program's inception in 1993, appropriations have totaled $20 million and have been matched by a corresponding amount of nonfederal support. Enacting this bill would enable the program to receive funding through 1998, and would reduce the multiyear authorization ceiling to $46 million.

Assuming funds are appropriated for these activities in 1998, CBO estimates that enacting H.R. 363 would result in additional discretionary spending of $4 million over the 1998-2002 period. The legislation would not affect direct spending or receipts; therefore, pay-as-you-go procedures would not apply. The legislation does not contain any intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act of 1995.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of H.R. 363 is shown in the table on the following page. For purposes of this estimatee, CBO assumes that appropriations for this program would total $4 million in 1998, the amount provided under current law for 1997, and that this amount would be matched by nonfederal sources. Although the amount authorized to be appropriated in 1998 could total up to $26 million (the balance between the $46 million cap and the $20 million appropriated to date), CBO

estimates that the program only needs about $4 million to complete its mission. We assume outlays would follow historical spending patterns for such research and assessment activities at DOE.

	By Fiscal Year, in Millions of Dollars					
	1997	1998	1999	2000	2001	2002
SPENDING SUBJECT TO APPROPRIATION:						
Spending Under Current Law						
Budget Authority†	4	0	0	0	0	0
Estimated Outlays	5	2	1	0	0	0
Proposed Changes						
Authorization Level	0	4	0	0	0	0
Estimated Outlays	0	2	1	1	0	0
Spending Under H.R. 363						
Authorization Level†	4	4	0	0	0	0
Estimated Outlays	5	4	2	1	0	0

†The 1997 level is the amount appropriated for that year.

The costs of this legislation fill within budget function 270 (energy).

PAY-AS YOU-GO CONSIDERATIONS: None.

INTERGOVERNMENTAL AND P RIVATE-SECTOR IMPACT

H.R. 363 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act of 1995, and would not impose any costs on state, local, or tribal governments.

PREVIOUS CBO ESTIMATE

On March 6, 1997, CBO transmitted a cost estimate for H.R. 363 as ordered reported by the House Committee on Commerce on March 5, 1997. The estimated budgetary impact of the two bills is the same. Although the Science Committee's version of H.R. 363 would reduce the amount authorized to be appropriated over the 6-year period from $65 million to $46 million, CBO estimates this change would not affect the level of spending expected over the 1998-2002 period, because both the existing cap and the lower cap exceed the amount of federal funding needed by the program to complete its mission.

ESTIMATE PREPARED BY: Kathleen Gramp (226-2860)

ESTIMATE APPROVED BY:
Robert A. Sunshine
Deputy Assistant Director for Budget Analysis

X. Compliance With Public Law 104-4

H.R. 363 contains no unfunded mandates.

XI. Committee Oversight Findings and Recommendations

Clause 2(l)(3)(A) of rule XI of the Rules of the House of Representatives requires each committee report to include oversight findings and recommendations required pursuant to clause 2(b)(1) of rule X. The Committee has no oversight findings.

XII. Oversight Findings and Recommendations by the Committee on Government Reform and Oversight

Clause 2(l)(3)(D) of rule XI of the Rules of the House of Representatives requires each committee report to contain a summary of the oversight findings and recommendations made by the House Government Reform and Oversight Committee pursuant to clause 4(c)(2) of rule X, whenever such findings and recommendations have been submitted to the Committee in a timely fashion. The Committee on Science has received no such findings or rec-

ommendations from the Committee on Government Reform and Oversight.

XIII. Constitutional Authority Statement

Clause 2(l)(4) of rule XI of the Rules of the House of Representatives requires each report of a Committee on a bill or joint resolution of a public character to include a statement citing the specific powers granted to the Congress in the Constitution to enact the law proposed by the bill or joint resolution. Article I, section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 363.

XIV. Federal Advisory Committee Statement

The functions of the advisory committees—the EMFIAC and the NEMFAC—extended in H.R. 363 are not currently being, nor could they be performed, by one or more agencies or by enlarging the mandate of another existing advisory committee.

XV. Congressional Accountability Act

The Committee finds that H.R. 363 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).

XVI. Changes in Existing Law Made by the Bill, As Reported

In compliance with clause 3 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 italics, existing law in which no change is proposed is shown in roman):

SECTION 2118 OF THE ENERGY POLICY ACT OF 1992

SEC. 2118. ELECTRIC AND MAGNETIC FIELDS RESEARCH AND PUBLIC INFORMATION DISSEMINATION PROGRAM.

(a) * * *

* * * * * * *

(c) Role of the Director.—

(1) * * *

* * * * * * *

(5) Report.—The Director shall report, by June 1, 1995, and by March 31, [1997] *1998*, and as appropriate, to the Interagency Committee established under subsection (d) and to Congress the findings and conclusions of the Director on the extent to which exposure to electric and magnetic fields produced by the generation, transmission, or use of electric energy affects human health.

* * * * * * *

(e) Advisory Committee.—

(1) * * *

* * * * * * *

(5) The Advisory Committee shall terminate not later than December 31, [1997] *1998*.

* * * * * * *

(g) REPORTS.—

(1) * * *

* * * * * * *

(3) REPORT TO CONGRESS.—The Interagency Committee, in consultation with the Advisory Committee, shall submit to the Secretary and the Congress—

(A) * * *

(B) not later than September 30, [1997] *1998*, a final report stating the Committee's findings and conclusions on the effects, if any, of electric and magnetic fields on human health and remedial actions, if any, that may be needed to minimize any such health effects.

* * * * * * *

(j) AUTHORIZATION OF APPROPRIATIONS.—

(1) GENERAL AUTHORIZATION.—There are authorized to be appropriated to the Secretary a total of [$65,000,000] *$46,000,000* for the period encompassing fiscal years 1993 through [1997] *1998* to carry out the provisions of this section, except that not more than $1,000,000 may be expended in any such fiscal year for activities under subsection (b)(1). Any amounts appropriated pursuant to this paragraph shall remain available until expended.

* * * * * * *

(l) SUNSET PROVISION.—All authority under this section shall expire on December 31, [1997] *1998*.

XVII. COMMITTEE RECOMMENDATIONS

On April 16, 1997, a quorum being present, the Committee favorably reported the bill to amend section 2118 of the Energy Policy Act of 1992 to extend the Electric and Magnetic Fields Research and Public Information Dissemination Program, by a voice vote, and recommended its enactment.

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