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S. 2636

To promote economically sound modernization of electric power generation capacity in the United States, to establish requirements to improve the combustion heat rate efficiency of fossil fuel-fired electric utility generating units, to reduce emissions of mercury, carbon dioxide, nitrogen oxides, and sulfur dioxide, to require that all fossil fuel-fired electric utility generating units operating in the United States meet new source review requirements, and to promote alternative energy sources such as solar, wind, and biomass.

IN THE SENATE OF THE UNITED STATES

OCTOBER 15 (legislative day, OCTOBER 2), 1998

Mr. LEAHY introduced the following bill; which was read twice and referred to the Committee on Finance

A BILL

To promote economically sound modernization of electric power generation capacity in the United States, to establish requirements to improve the combustion heat rate efficiency of fossil fuel-fired electric utility generating units, to reduce emissions of mercury, carbon dioxide, nitrogen oxides, and sulfur dioxide, to require that all fossil fuel-fired electric utility generating units operating in the United States meet new source review requirements, and to promote alternative energy sources such as solar, wind, and biomass.

1 *Be it enacted by the Senate and House of Representa-*
 2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
 5 “Clean Power Plant and Modernization Act of 1998”.

6 (b) TABLE OF CONTENTS.—The table of contents of
 7 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings and purposes.
- Sec. 3. Definitions.
- Sec. 4. Combustion heat rate efficiency standards for fossil fuel-fired generating units.
- Sec. 5. Air emission standards for fossil fuel-fired generating units.
- Sec. 6. Accelerated depreciation for investor-owned generating units.
- Sec. 7. Grants for publicly owned generating units.
- Sec. 8. Clean Air Trust Fund.
- Sec. 9. Carbon dioxide emission fees.
- Sec. 10. Extension of renewable energy production credit.
- Sec. 11. Recognition of permanent emission reductions in future climate change implementation programs.
- Sec. 12. Renewable power generation technologies.
- Sec. 13. Evaluation of implementation of this Act and other statutes.
- Sec. 14. Assistance for workers adversely affected by reduced consumption of coal.
- Sec. 15. Community economic development incentives for communities adversely affected by reduced consumption of coal.
- Sec. 16. Carbon sequestration.

8 **SEC. 2. FINDINGS AND PURPOSES.**

9 (a) FINDINGS.—Congress finds that—

10 (1) the United States is relying increasingly on
 11 old, needlessly inefficient, and highly polluting pow-
 12 erplants to provide electricity;

13 (2) the pollution from those powerplants causes
 14 a wide range of health and environmental damage,
 15 including—

1 (A) fine particulate matter that is associ-
2 ated with the deaths of approximately 50,000
3 Americans annually;

4 (B) urban ozone, commonly known as
5 “smog”, that impairs normal respiratory func-
6 tions and is of special concern to individuals af-
7 flicted with asthma, emphysema, and other res-
8 piratory ailments;

9 (C) rural ozone that obscures visibility and
10 damages forests and wildlife;

11 (D) acid deposition that damages estu-
12 aries, lakes, rivers, and streams (and the plants
13 and animals that depend on them for survival)
14 and leaches heavy metals from the soil;

15 (E) mercury and heavy metal contamina-
16 tion that renders fish unsafe to eat, with espe-
17 cially serious consequences for pregnant women
18 and their fetuses;

19 (F) eutrophication of estuaries, lakes, riv-
20 ers, and streams; and

21 (G) global climate change that may fun-
22 damentally and irreversibly alter human, ani-
23 mal, and plant life;

24 (3) tax laws and environmental laws—

1 (A) provide a very strong incentive for
2 electric utilities to keep old, dirty, and ineffi-
3 cient generating units in operation; and

4 (B) provide a strong disincentive to invest-
5 ing in new, clean, and efficient generating tech-
6 nologies;

7 (4) fossil fuel-fired power plants, consisting of
8 plants fueled by coal, fuel oil, and natural gas,
9 produce nearly two-thirds of the electricity generated
10 in the United States;

11 (5) since, according to the Department of En-
12 ergy, the average combustion heat rate efficiency of
13 fossil fuel-fired power plants in the United States is
14 33 percent, 67 percent of the heat generated by
15 burning the fuel is wasted;

16 (6) technology exists to increase the combustion
17 heat rate efficiency of coal combustion from 35 per-
18 cent to 50 percent above current levels, and techno-
19 logical advances are possible that would boost the
20 net combustion heat rate efficiency even more;

21 (7) coal-fired power plants are the leading
22 source of mercury emissions in the United States,
23 releasing an estimated 52 tons of this potent
24 neurotoxin each year;

1 (8) in 1996, fossil fuel-fired power plants in the
2 United States produced over 2,000,000,000 tons of
3 carbon dioxide, the primary greenhouse gas;

4 (9) on average—

5 (A) fossil fuel-fired power plants emit
6 1,999 pounds of carbon dioxide for every mega-
7 watt hour of electricity produced;

8 (B) coal-fired power plants emit 2,110
9 pounds of carbon dioxide for every megawatt
10 hour of electricity produced; and

11 (C) coal-fired power plants emit 205
12 pounds of carbon dioxide for every million Brit-
13 ish thermal units of fuel consumed;

14 (10) the average fossil fuel-fired generating unit
15 in the United States commenced operation in 1964,
16 6 years before the Clean Air Act (42 U.S.C. 7401
17 et seq.) was amended to establish requirements for
18 stationary sources;

19 (11)(A) according to the Department of En-
20 ergy, only 23 percent of the 1,000 largest emitting
21 units are subject to stringent new source perform-
22 ance standards under section 111 of the Clean Air
23 Act (42 U.S.C. 7411); and

1 (B) the remaining 77 percent, commonly re-
2 ferred to as “grandfathered” power plants, are sub-
3 ject to much less stringent requirements;

4 (12) on the basis of scientific and medical evi-
5 dence, exposure to mercury and mercury compounds
6 is of concern to human health and the environment;

7 (13) pregnant women and their developing
8 fetuses, women of childbearing age, and children are
9 most at risk for mercury-related health impacts such
10 as neurotoxicity;

11 (14) although exposure to mercury and mercury
12 compounds occurs most frequently through con-
13 sumption of mercury-contaminated fish, such expo-
14 sure can also occur through—

15 (A) ingestion of breast milk;

16 (B) ingestion of drinking water, and foods
17 other than fish, that are contaminated with
18 methyl mercury; and

19 (C) dermal uptake through contact with
20 soil and water;

21 (15) the report entitled “Mercury Study Report
22 to Congress” and submitted by the Environmental
23 Protection Agency under section 112(n)(1)(B) of the
24 Clean Air Act (42 U.S.C. 7412(n)(1)(B)), in con-
25 junction with other scientific knowledge, supports a

1 plausible link between mercury emissions from com-
2 bustion of coal and other fossil fuels and mercury
3 concentrations in air, soil, water, and sediments;

4 (16)(A) the Environmental Protection Agency
5 report described in paragraph (15) supports a plau-
6 sible link between mercury emissions from combus-
7 tion of coal and other fossil fuels and methyl mer-
8 cury concentrations in freshwater fish;

9 (B) in 1997, 39 States issued health advisories
10 that warned the public about consuming mercury-
11 tainted fish, as compared to 27 States that issued
12 such advisories in 1993; and

13 (C) the number of mercury advisories nation-
14 wide increased from 899 in 1993 to 1,675 in 1996,
15 an increase of 86 percent;

16 (17) pollution from powerplants can be reduced
17 and possibly eliminated through adoption of modern
18 technologies and practices, including—

19 (A) methods of combusting coal that are
20 intrinsically more efficient and less polluting,
21 such as pressurized fluidized bed combustion
22 and an integrated gasification combined cycle
23 system;

1 (B) methods of combusting cleaner fuels,
2 such as gases from fossil and biological re-
3 sources and combined cycle turbines;

4 (C) treating flue gases through application
5 of pollution controls;

6 (D) methods of extracting energy from
7 natural, renewable resources of energy, such as
8 solar and wind sources;

9 (E) methods of producing electricity and
10 thermal energy from fuels without conventional
11 combustion, such as fuel cells; and

12 (F) methods of extracting and using heat
13 that would otherwise be wasted, for the purpose
14 of heating or cooling office buildings, providing
15 steam to processing facilities, or otherwise in-
16 creasing total efficiency; and

17 (18) adopting the technologies and practices de-
18 scribed in paragraph (17) would increase competi-
19 tiveness and productivity, secure employment, save
20 lives, and preserve the future.

21 (b) PURPOSES.—The purposes of this Act are—

22 (1) to protect and preserve the environment
23 while safeguarding health by ensuring that each fos-
24 sil fuel-fired generating unit minimizes air pollution

1 to levels that are technologically feasible through
2 modernization and application of pollution controls;

3 (2) to greatly reduce the quantities of mercury,
4 carbon dioxide, sulfur dioxide, and nitrogen oxides
5 entering the environment from combustion of fossil
6 fuels;

7 (3) to permanently reduce emissions of those
8 pollutants by increasing the combustion heat rate ef-
9 ficiency of fossil fuel-fired generating units to levels
10 achievable through use of commercially available
11 combustion technology, installation of pollution con-
12 trols, and expanded use of renewable energy sources
13 such as biomass, geothermal, solar, and wind
14 sources;

15 (4)(A) to create financial and regulatory incen-
16 tives to retire thermally inefficient generating units
17 and replace them with new units that employ high-
18 thermal-efficiency combustion technology; and

19 (B) to increase use of renewable energy sources
20 such as biomass, geothermal, solar, and wind
21 sources;

22 (5) to establish the Clean Air Trust Fund for
23 the purpose of encouraging and facilitating the mod-
24 ernization of fossil fuel-fired generating units in the
25 United States;

1 (6) to eliminate the “grandfather” loophole in
2 the Clean Air Act relating to sources in operation
3 before the promulgation of standards under section
4 111 of that Act (42 U.S.C. 7411);

5 (7) to express the sense of Congress that per-
6 manent reductions in emissions of greenhouse gases
7 that are accomplished through the retirement of old
8 units and replacement by new units that meet the
9 combustion heat rate efficiency and emission stand-
10 ards specified in this Act should be credited to the
11 utility sector in any climate change implementation
12 program;

13 (8) to promote permanent and safe disposal of
14 mercury recovered through coal cleaning, flue gas
15 control systems, and other methods of mercury pol-
16 lution control;

17 (9) to increase public knowledge of the sources
18 of mercury exposure and the threat to public health
19 from mercury, particularly the threat to the health
20 of pregnant women and their fetuses, women of
21 childbearing age, and children;

22 (10) to decrease significantly the threat to
23 human health and the environment posed by mer-
24 cury;

1 (11) to promote energy efficiency in homes, in-
2 cluding major appliances;

3 (12) to provide worker retraining for workers
4 adversely affected by reduced consumption of coal;
5 and

6 (13) to provide economic development incentives
7 for communities adversely affected by reduced con-
8 sumption of coal.

9 **SEC. 3. DEFINITIONS.**

10 In this Act:

11 (1) ADMINISTRATOR.—The term “Adminis-
12 trator” means the Administrator of the Environ-
13 mental Protection Agency.

14 (2) GENERATING UNIT.—The term “generating
15 unit” means an electric utility generating unit.

16 **SEC. 4. COMBUSTION HEAT RATE EFFICIENCY STANDARDS**
17 **FOR FOSSIL FUEL-FIRED GENERATING**
18 **UNITS.**

19 (a) STANDARDS.—

20 (1) IN GENERAL.—Not later than the day that
21 is 10 years after the date of enactment of this Act,
22 each fossil fuel-fired generating unit that commences
23 operation on or before that day shall achieve and
24 maintain, at all operating levels, a combustion heat

1 rate efficiency of not less than 45 percent (based on
2 the higher heating value of the fuel).

3 (2) FUTURE GENERATING UNITS.—Each fossil
4 fuel-fired generating unit that commences operation
5 more than 10 years after the date of enactment of
6 this Act shall achieve and maintain, at all operating
7 levels, a combustion heat rate efficiency of not less
8 than 50 percent (based on the higher heating value
9 of the fuel), unless granted a waiver under sub-
10 section (d).

11 (b) TEST METHODS.—Not later than 2 years after
12 the date of enactment of this Act, the Administrator, in
13 consultation with the Secretary of Energy, shall promul-
14 gate methods for determining initial and continuing com-
15 pliance with this section.

16 (c) PERMIT REQUIREMENT.—Not later than 10 years
17 after the date of enactment of this Act, each generating
18 unit shall have a permit issued under title V of the Clean
19 Air Act (42 U.S.C. 7661 et seq.) that requires compliance
20 with this section.

21 (d) WAIVER OF COMBUSTION HEAT RATE EFFI-
22 CIENCY STANDARD.—

23 (1) APPLICATION.—The owner or operator of a
24 generating unit that commences operation more than
25 10 years after the date of enactment of this Act may

1 apply to the Administrator for a waiver of the com-
2 bustion heat rate efficiency standard specified in
3 subsection (a)(2) that is applicable to that type of
4 generating unit.

5 (2) ISSUANCE.—The Administrator may grant
6 the waiver only if—

7 (A)(i) the owner or operator of the gener-
8 ating unit demonstrates that the technology to
9 meet the combustion heat rate efficiency stand-
10 ard is not commercially available; or

11 (ii) the owner or operator of the generating
12 unit demonstrates that, despite best technical
13 efforts and willingness to make the necessary
14 level of financial commitment, the combustion
15 heat rate efficiency standard is not achievable
16 at the generating unit; and

17 (B) the owner or operator of the generat-
18 ing unit enters into an agreement with the Ad-
19 ministrator to offset by a factor of 1.5 to 1,
20 using a method approved by the Administrator,
21 the emission reductions that the generating unit
22 does not achieve because of the failure to
23 achieve the combustion heat rate efficiency
24 standard specified in subsection (a)(2).

1 (3) EFFECT OF WAIVER.—If the Administrator
2 grants a waiver under paragraph (1), the generating
3 unit shall be required to achieve and maintain, at all
4 operating levels, the combustion heat rate efficiency
5 standard specified in subsection (a)(1).

6 **SEC. 5. AIR EMISSION STANDARDS FOR FOSSIL FUEL-FIRED**
7 **GENERATING UNITS.**

8 (a) ALL FOSSIL FUEL-FIRED GENERATING
9 UNITS.—Not later than 10 years after the date of enact-
10 ment of this Act, each fossil fuel-fired generating unit, re-
11 gardless of its date of construction or commencement of
12 operation, shall be subject to, and operating in physical
13 and operational compliance with, the new source review
14 requirements under section 111 of the Clean Air Act (42
15 U.S.C. 7411).

16 (b) EMISSION RATES FOR SOURCES REQUIRED TO
17 MAINTAIN 45 PERCENT EFFICIENCY.—Not later than 10
18 years after the date of enactment of this Act, each fossil
19 fuel-fired generating unit subject to section 4(a)(1) shall
20 be in compliance with the following emission limitations:

21 (1) MERCURY.—Each coal-fired or fuel oil-fired
22 generating unit shall be required to remove 95 per-
23 cent of the mercury contained in the fuel, calculated
24 in accordance with subsection (e).

25 (2) CARBON DIOXIDE.—

1 (A) NATURAL GAS-FIRED GENERATING
2 UNITS.—Each natural gas-fired generating unit
3 shall be required to achieve an emission rate of
4 not more than 0.9 pounds of carbon dioxide per
5 kilowatt hour of net electric power output.

6 (B) FUEL OIL-FIRED GENERATING
7 UNITS.—Each fuel oil-fired generating unit
8 shall be required to achieve an emission rate of
9 not more than 1.3 pounds of carbon dioxide per
10 kilowatt hour of net electric power output.

11 (C) COAL-FIRED GENERATING UNITS.—
12 Each coal-fired generating unit shall be re-
13 quired to achieve an emission rate of not more
14 than 1.55 pounds of carbon dioxide per kilowatt
15 hour of net electric power output.

16 (3) SULFUR DIOXIDE.—Each fossil fuel-fired
17 generating unit shall be required—

18 (A) to remove 95 percent of the sulfur di-
19 oxide that would otherwise be present in the
20 flue gas; and

21 (B) to achieve an emission rate of not
22 more than 0.3 pounds of sulfur dioxide per mil-
23 lion British thermal units of fuel consumed.

24 (4) NITROGEN OXIDES.—Each fossil fuel-fired
25 generating unit shall be required—

1 (A) to remove 90 percent of nitrogen ox-
2 ides that would otherwise be present in the flue
3 gas; and

4 (B) to achieve an emission rate of not
5 more than 0.15 pounds of nitrogen oxides per
6 million British thermal units of fuel consumed.

7 (c) EMISSION RATES FOR SOURCES REQUIRED TO
8 MAINTAIN 50 PERCENT EFFICIENCY.—Each fossil fuel-
9 fired generating unit subject to section 4(a)(2) shall be
10 in compliance with the following emission limitations:

11 (1) MERCURY.—Each coal-fired or fuel oil-fired
12 generating unit shall be required to remove 95 per-
13 cent of the mercury contained in the fuel, calculated
14 in accordance with subsection (e).

15 (2) CARBON DIOXIDE.—

16 (A) NATURAL GAS-FIRED GENERATING
17 UNITS.—Each natural gas-fired generating unit
18 shall be required to achieve an emission rate of
19 not more than 0.8 pounds of carbon dioxide per
20 kilowatt hour of net electric power output.

21 (B) FUEL OIL-FIRED GENERATING
22 UNITS.—Each fuel oil-fired generating unit
23 shall be required to achieve an emission rate of
24 not more than 1.2 pounds of carbon dioxide per
25 kilowatt hour of net electric power output.

1 (C) COAL-FIRED GENERATING UNITS.—

2 Each coal-fired generating unit shall be re-
3 quired to achieve an emission rate of not more
4 than 1.4 pounds of carbon dioxide per kilowatt
5 hour of net electric power output.

6 (3) SULFUR DIOXIDE.—Each fossil fuel-fired
7 generating unit shall be required—

8 (A) to remove 95 percent of the sulfur di-
9 oxide that would otherwise be present in the
10 flue gas; and

11 (B) to achieve an emission rate of not
12 more than 0.3 pounds of sulfur dioxide per mil-
13 lion British thermal units of fuel consumed.

14 (4) NITROGEN OXIDES.—Each fossil fuel-fired
15 generating unit shall be required—

16 (A) to remove 90 percent of nitrogen ox-
17 ides that would otherwise be present in the flue
18 gas; and

19 (B) to achieve an emission rate of not
20 more than 0.15 pounds of nitrogen oxides per
21 million British thermal units of fuel consumed.

22 (d) PERMIT REQUIREMENT.—Not later than 10
23 years after the date of enactment of this Act, each gener-
24 ating unit shall have a permit issued under title V of the

1 Clean Air Act (42 U.S.C. 7661 et seq.) that requires com-
2 pliance with this section.

3 (e) COMPLIANCE DETERMINATION AND MONITOR-
4 ING.—

5 (1) REGULATIONS.—Not later than 2 years
6 after the date of enactment of this Act, the Adminis-
7 trator, in consultation with the Secretary of Energy,
8 shall promulgate methods for determining initial and
9 continuing compliance with this section.

10 (2) CALCULATION OF MERCURY EMISSION RE-
11 DUCTIONS.—Not later than 2 years after the date of
12 enactment of this Act, the Administrator shall pro-
13 mulgate fuel sampling techniques and emission mon-
14 itoring techniques for use by generating units in cal-
15 culating mercury emission reductions for the pur-
16 poses of this section.

17 (3) REPORTING.—

18 (A) IN GENERAL.—Not less than often
19 than quarterly, the owner or operator of a gen-
20 erating unit shall submit a pollutant-specific
21 emission report for each pollutant covered by
22 this section.

23 (B) SIGNATURE.—Each report required
24 under subparagraph (A) shall be signed by a re-

1 sponsible official of the generating unit, who
2 shall certify the accuracy of the report.

3 (C) PUBLIC REPORTING.—The Adminis-
4 trator shall annually make available to the pub-
5 lic, through 1 or more published reports and 1
6 or more forms of electronic media, facility-spe-
7 cific emission data for each generating unit and
8 pollutant covered by this section.

9 (f) DISPOSAL OF MERCURY CAPTURED OR RECOV-
10 ERED THROUGH EMISSION CONTROLS.—

11 (1) CAPTURED OR RECOVERED MERCURY.—Not
12 later than 2 years after the date of enactment of
13 this Act, the Administrator shall promulgate regula-
14 tions to ensure that mercury that is captured or re-
15 covered through the use of an emission control, coal
16 cleaning, or another method is disposed of in a man-
17 ner that ensures that—

18 (A) the hazards from mercury are not
19 transferred from 1 environmental medium to
20 another; and

21 (B) there is no release of mercury into the
22 environment.

23 (2) MERCURY-CONTAINING SLUDGES AND
24 WASTES.—The regulations promulgated by the Ad-
25 ministrator under paragraph (1) shall ensure that

1 mercury-containing sludges and wastes are handled
 2 and disposed of in accordance with all applicable
 3 Federal and State laws (including regulations).

4 (g) PUBLIC REPORTING OF FACILITY-SPECIFIC
 5 EMISSION DATA.—

6 (1) IN GENERAL.—The Administrator shall an-
 7 nually make available to the public, through 1 or
 8 more published reports and the Internet, facility-spe-
 9 cific emission data for each generating unit and for
 10 each pollutant covered by this section.

11 (2) SOURCE OF DATA.—The emission data shall
 12 be taken from the emission reports submitted under
 13 subsection (e)(3).

14 **SEC. 6. ACCELERATED DEPRECIATION FOR INVESTOR-**
 15 **OWNED GENERATING UNITS.**

16 (a) IN GENERAL.—Section 168(e)(3) of the Internal
 17 Revenue Code of 1986 (relating to classification of certain
 18 property) is amended—

19 (1) in subparagraph (D) (relating to 10-year
 20 property), by striking “and” at the end of clause (i),
 21 by striking the period at the end of clause (ii) and
 22 inserting “, and”, and by adding at the end the fol-
 23 lowing:

24 “(iii) any 50-percent efficient fossil
 25 fuel-fired generating unit.”; and

1 (2) in subparagraph (E) (relating to 15-year
2 property), by striking “and” at the end of clause
3 (ii), by striking the period at the end of clause (iii)
4 and inserting “, and”, and by adding at the end the
5 following:

6 “(iv) any 45-percent efficient fossil
7 fuel-fired generating unit.”.

8 (b) DEFINITIONS.—Section 168(i) of the Internal
9 Revenue Code of 1986 (relating to definitions and special
10 rules) is amended by adding at the end the following:

11 “(15) FOSSIL FUEL-FIRED GENERATING
12 UNITS.—

13 “(A) 50-PERCENT EFFICIENT FOSSIL
14 FUEL-FIRED GENERATING UNIT.—The term
15 ‘50-percent efficient fossil fuel-fired generating
16 unit’ means any property used in an investor-
17 owned fossil fuel-fired generating unit pursuant
18 to a plan approved by the Secretary, in con-
19 sultation with the Administrator of the Envi-
20 ronmental Protection Agency, to place into
21 service such a unit that is in compliance with
22 sections 4(a)(2) and 5(c) of the Clean Power
23 Plant and Modernization Act of 1998, as in ef-
24 fect on the date of enactment of this paragraph.

1 “(B) 45-PERCENT EFFICIENT FOSSIL
2 FUEL-FIRED GENERATING UNIT.—The term
3 ‘45-percent efficient fossil fuel-fired generating
4 unit’ means any property used in an investor-
5 owned fossil fuel-fired generating unit pursuant
6 to a plan so approved to place into service such
7 a unit that is in compliance with sections
8 4(a)(1) and 5(b) of such Act, as so in effect.”.

9 (c) EFFECTIVE DATE.—The amendments made by
10 this section shall apply to property used after the date of
11 enactment of this Act.

12 **SEC. 7. GRANTS FOR PUBLICLY OWNED GENERATING**
13 **UNITS.**

14 Any capital expenditure made after the date of enact-
15 ment of this Act to purchase, install, and bring into com-
16 mercial operation any new publicly owned generating unit
17 that—

18 (1) is in compliance with sections 4(a)(1) and
19 5(b) shall, for a 15-year period, be eligible for par-
20 tial reimbursement through annual grants made by
21 the Secretary of the Treasury, in consultation with
22 the Administrator, in an amount equal to the mone-
23 tary value of the depreciation deduction that would
24 be realized by reason of section 168(c)(3)(E) of the
25 Internal Revenue Code of 1986 by a similarly-situ-

1 ated investor-owned generating unit over that pe-
2 riod; and

3 (2) is in compliance with sections 4(a)(2) and
4 5(c) shall, over a 10-year period, be eligible for par-
5 tial reimbursement through annual grants made by
6 the Secretary of the Treasury, in consultation with
7 the Administrator, in an amount equal to the mone-
8 tary value of the depreciation deduction that would
9 be realized by reason of section 168(c)(3)(D) of such
10 Code by a similarly-situated investor-owned generat-
11 ing unit over that period.

12 **SEC. 8. CLEAN AIR TRUST FUND.**

13 (a) IN GENERAL.—Subchapter A of chapter 98 of the
14 Internal Revenue Code of 1986 (relating to trust fund
15 code) is amended by adding at the end the following:

16 **“SEC. 9511. CLEAN AIR TRUST FUND.**

17 “(a) CREATION OF TRUST FUND.—There is estab-
18 lished in the Treasury of the United States a trust fund
19 to be known as the ‘Clean Air Trust Fund’ (hereafter re-
20 ferred to in this section as the ‘Trust Fund’), consisting
21 of such amounts as may be appropriated or credited to
22 the Trust Fund as provided in this section or section
23 9602(b).

24 “(b) TRANSFERS TO TRUST FUND.—

1 “(1) IN GENERAL.—There are hereby appro-
2 priated to the Trust Fund amounts equivalent to the
3 taxes received in the Treasury under section 4691.

4 “(2) AUTHORIZATION OF APPROPRIATIONS.—
5 There are authorized to be appropriated to the
6 Trust Fund such additional sums as are necessary
7 to carry out the activities described in subsection (c).

8 “(c) EXPENDITURES FROM TRUST FUND.—Amounts
9 in the Trust Fund shall be available, as provided by appro-
10 piation Acts, upon request by the head of the appropriate
11 Federal agency in such amounts as the agency head deter-
12 mines are necessary—

13 “(1) to offset reductions of revenues to the
14 Treasury resulting from the amendments made by
15 section 6 of the Clean Power Plant and Moderniza-
16 tion Act of 1998;

17 “(2) to provide grants under section 7 of such
18 Act, as in effect on the date of enactment of this
19 section;

20 “(3) to provide assistance under section 14 of
21 such Act, as so in effect;

22 “(4) to provide community economic develop-
23 ment incentives under section 15, as so in effect;
24 and

1 “(c) ADJUSTMENT OF RATES.—Not less often than
2 once every 2 years beginning after 2002, the Secretary,
3 in consultation with the Administrator of the Environ-
4 mental Protection Agency, shall evaluate the rate of the
5 tax imposed by subsection (a) and increase the rate if nec-
6 essary for the calendar year—

7 “(1) to ensure that emissions of carbon dioxide
8 are reduced to levels that are adequate to protect
9 sensitive populations, with an adequate margin of
10 safety, against adverse health effects;

11 “(2) to ensure that emissions of carbon dioxide
12 are reduced to levels (including, if necessary, a level
13 of zero emissions) that preclude any reasonable pos-
14 sibility that the environment, including sensitive spe-
15 cies or ecosystems, will be seriously or permanently
16 altered on a global, continental, or subcontinental
17 scale;

18 “(3) to provide adequate incentives for generat-
19 ing units to minimize emissions of carbon dioxide to
20 levels that are technologically feasible, including a
21 level of zero emissions; and

22 “(4) to eliminate any economic benefit that a
23 generating unit may derive from the emission of car-
24 bon dioxide.

1 “(d) PAYMENT OF TAX.—The tax imposed by this
2 section—

3 “(1) shall be paid quarterly by the owner or op-
4 erator of each fossil fuel-fired generating unit; and

5 “(2) shall be based on the measured emissions
6 of the generating unit.

7 “(e) FOSSIL FUEL-FIRED GENERATING UNIT.—The
8 term ‘fossil fuel-fired generating unit’ means a generating
9 unit (as defined in section 3(2) of the Clean Power Plant
10 and Modernization Act of 1998) powered by fossil fuels.”.

11 (b) CONFORMING AMENDMENT.—The table of sub-
12 chapters for chapter 38 of such Code is amended by in-
13 serting after the item relating to subchapter D the follow-
14 ing:

 “SUBCHAPTER E. Carbon dioxide emission fees.”.

15 (c) EFFECTIVE DATE.—The amendments made by
16 this section shall apply to emissions in calendar years be-
17 ginning after December 31, 2002.

18 **SEC. 10. EXTENSION OF RENEWABLE ENERGY PRODUCTION**
19 **CREDIT.**

20 Section 45(c) of the Internal Revenue Code of 1986
21 (relating to definitions) is amended—

22 (1) in paragraph (1)—

23 (A) in subparagraph (A), by striking

24 “and”;

1 (B) in subparagraph (B), by striking the
2 period and inserting “, and”; and

3 (C) by adding at the end the following:

4 “(C) solar power.”;

5 (2) in paragraph (3)—

6 (A) by inserting “, and December 31,
7 1998, in the case of a facility using solar power
8 to produce electricity” after “electricity”; and

9 (B) by striking “1999” and inserting
10 “2010”; and

11 (3) by adding at the end the following:

12 “(4) SOLAR POWER.—The term ‘solar power’
13 means solar power harnessed through—

14 “(A) photovoltaic systems,

15 “(B) solar boilers that provide process
16 heat, and

17 “(C) any other means.”.

18 **SEC. 11. RECOGNITION OF PERMANENT EMISSION REDUC-**
19 **TIONS IN FUTURE CLIMATE CHANGE IMPLE-**
20 **MENTATION PROGRAMS.**

21 It is the sense of Congress that permanent reductions
22 in emissions of carbon dioxide and nitrogen oxides that
23 are accomplished through the retirement of old generating
24 units and replacement by new generating units that meet
25 the combustion heat rate efficiency and emission stand-

1 ards specified in this Act, or through replacement of old
2 generating units with nonpolluting renewable power gen-
3 eration technologies, should be credited to the utility sec-
4 tor, and to the owner or operator that retires or replaces
5 the old generating unit, in any climate change implemen-
6 tation program enacted by Congress.

7 **SEC. 12. RENEWABLE POWER GENERATION TECH-**
8 **NOLOGIES.**

9 (a) **IN GENERAL.**—Under the Renewable Energy and
10 Energy Efficiency Technology Act of 1989 (42 U.S.C.
11 12001 et seq.), the Secretary of Energy shall fund re-
12 search and development programs and commercial dem-
13 onstration projects and partnerships to demonstrate the
14 commercial viability and environmental benefits of electric
15 power generation from biomass, geothermal, solar, and
16 wind technologies.

17 (b) **TYPES OF PROJECTS.**—Demonstration projects
18 may include solar power tower plants, solar dishes and en-
19 gines, co-firing of biomass with coal, biomass modular sys-
20 tems, next-generation wind turbines and wind turbine ver-
21 ification projects, and geothermal energy conversion.

22 (c) **AUTHORIZATION OF APPROPRIATIONS.**—In addi-
23 tion to amounts made available under any other law, there
24 is authorized to be appropriated to carry out this section
25 \$75,000,000 for each of fiscal years 2003 through 2015.

1 **SEC. 13. EVALUATION OF IMPLEMENTATION OF THIS ACT**
2 **AND OTHER STATUTES.**

3 (a) **IN GENERAL.**—Not later than 2 years after the
4 date of enactment of this Act, the Secretary of Energy,
5 in consultation with the Chairman of the Federal Energy
6 Regulatory Commission and the Administrator, shall sub-
7 mit to Congress a report on the implementation of this
8 Act.

9 (b) **IDENTIFICATION OF CONFLICTING LAW.**—The
10 report shall identify any provision of the Energy Policy
11 Act of 1992 (Public Law 102–486), the Energy Supply
12 and Environmental Coordination Act of 1974 (15 U.S.C.
13 791 et seq.), the Public Utility Regulatory Policies Act
14 of 1978 (16 U.S.C. 2601 et seq.), or the Powerplant and
15 Industrial Fuel Use Act of 1978 (42 U.S.C. 8301 et seq.),
16 or the amendments made by those Acts, that conflicts with
17 the intent or efficient implementation of this Act.

18 (c) **RECOMMENDATIONS.**—The report shall include
19 recommendations from the Secretary of Energy, the
20 Chairman of the Federal Energy Regulatory Commission,
21 and the Administrator for legislative or administrative
22 measures to harmonize and streamline the statutes speci-
23 fied in subsection (b) and the regulations implementing
24 those statutes.

1 **SEC. 14. ASSISTANCE FOR WORKERS ADVERSELY AF-**
2 **FFECTED BY REDUCED CONSUMPTION OF**
3 **COAL.**

4 In addition to amounts made available under any
5 other law, there is authorized to be appropriated
6 \$75,000,000 for each of fiscal years 2003 through 2010,
7 and \$50,000,000 for each of fiscal years 2011 through
8 2015, to provide assistance, under the economic disloca-
9 tion and worker adjustment assistance program of the De-
10 partment of Labor authorized by title III of the Job
11 Training Partnership Act (29 U.S.C. 1651 et seq.), to coal
12 industry workers who are terminated from employment as
13 a result of reduced consumption of coal by the electric
14 power generation industry.

15 **SEC. 15. COMMUNITY ECONOMIC DEVELOPMENT INCEN-**
16 **TIVES FOR COMMUNITIES ADVERSELY AF-**
17 **FFECTED BY REDUCED CONSUMPTION OF**
18 **COAL.**

19 In addition to amounts made available under any
20 other law, there is authorized to be appropriated
21 \$75,000,000 for each of fiscal years 2003 through 2010,
22 and \$50,000,000 for each of fiscal years 2011 through
23 2015, to provide assistance, under the economic adjust-
24 ment program of the Department of Commerce authorized
25 by the Public Works and Economic Development Act of
26 1965 (42 U.S.C. 3121 et seq.), to assist communities ad-

1 versely affected by reduced consumption of coal by the
2 electric power generation industry.

3 **SEC. 16. CARBON SEQUESTRATION.**

4 (a) CARBON SEQUESTRATION STRATEGY.—In addi-
5 tion to amounts made available under any other law, there
6 is authorized to be appropriated to the Environmental
7 Protection Agency and the Department of Energy for each
8 of fiscal years 2003 through 2005 a total of \$15,000,000
9 to conduct research and development activities in basic
10 and applied science in support of development by January
11 1, 2005, of a carbon sequestration strategy that is de-
12 signed to offset all growth in carbon dioxide emissions in
13 the United States after 2010.

14 (b) METHODS FOR BIOLOGICALLY SEQUESTERING
15 CARBON DIOXIDE.—In addition to amounts made avail-
16 able under any other law, there is authorized to be appro-
17 priated to the Environmental Protection Agency and the
18 Department of Agriculture for each of fiscal years 2003
19 through 2015 a total of \$15,000,000 to carry out soil res-
20 toration, tree planting, wetland protection, and other
21 methods of biologically sequestering carbon dioxide.

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