

107TH CONGRESS
1ST SESSION

S. 1131

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, to promote the use of clean coal technologies, and to promote alternative energy and clean energy sources such as solar, wind, biomass, and fuel cells.

IN THE SENATE OF THE UNITED STATES

JUNE 28, 2001

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, to promote the use of clean coal technologies, and to promote alternative energy and clean energy sources such as solar, wind, biomass, and fuel cells.

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 2001”.

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. Extension of renewable energy production credit.
- Sec. 7. Megawatt hour generation fees.
- Sec. 8. Clean Air Trust Fund.
- Sec. 9. Accelerated depreciation for investor-owned generating units.
- Sec. 10. Grants for publicly owned generating units.
- Sec. 11. Recognition of permanent emission reductions in future climate change implementation programs.
- Sec. 12. Renewable and clean power generation technologies.
- Sec. 13. Clean coal, advanced gas turbine, and combined heat and power demonstration program.
- Sec. 14. Evaluation of implementation of this Act and other statutes.
- Sec. 15. Assistance for workers adversely affected by reduced consumption of coal.
- Sec. 16. Community economic development incentives for communities adversely affected by reduced consumption of coal.
- Sec. 17. Carbon sequestration.
- Sec. 18. Atmospheric monitoring.

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 power
 12 plants to provide electricity;

1 (2) the pollution from those power plants
2 causes a wide range of health and environmental
3 damage, including—

4 (A) fine particulate matter that is associ-
5 ated with the deaths of approximately 50,000
6 Americans annually;

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

12 (C) rural ozone that obscures visibility and
13 damages forests and wildlife;

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

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

22 (F) eutrophication of estuaries, lakes, riv-
23 ers, and streams; and

1 (G) global climate change that may fun-
2 damentally and irreversibly alter human, ani-
3 mal, and plant life;

4 (3) tax laws and environmental laws—

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

8 (B) provide a strong disincentive to invest-
9 ing in new, clean, and efficient generating tech-
10 nologies;

11 (4) fossil fuel-fired power plants, consisting of
12 plants fueled by coal, fuel oil, and natural gas,
13 produce more than two-thirds of the electricity gen-
14 erated in the United States;

15 (5) since, according to the Department of En-
16 ergy, the average combustion heat rate efficiency of
17 fossil fuel-fired power plants in the United States is
18 33 percent, 67 percent of the heat generated by
19 burning the fuel is wasted;

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

1 (7) coal-fired power plants are the leading
2 source of mercury emissions in the United States,
3 releasing more than 43 tons of this potent
4 neurotoxin each year;

5 (8) in 1999, fossil fuel-fired power plants in the
6 United States produced nearly 2,200,000,000 tons
7 of carbon dioxide, the primary greenhouse gas;

8 (9) on average, fossil fuel-fired power plants
9 emit approximately 2,000 pounds of carbon dioxide
10 for every megawatt hour of electricity produced;

11 (10) the average fossil fuel-fired generating unit
12 in the United States commenced operation in 1964,
13 6 years before the Clean Air Act (42 U.S.C. 7401
14 et seq.) was amended to establish requirements for
15 stationary sources;

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

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

24 (12) according to available scientific and med-
25 ical evidence, exposure to mercury and mercury com-

1 pounds is of concern to human health and the envi-
2 ronment;

3 (13) according to the report entitled “Toxi-
4 cological Effects of Methylmercury” and submitted
5 to Congress by the National Academy of Sciences
6 in 2000, and other scientific and medical evidence,
7 pregnant women and their developing fetuses,
8 women of childbearing age, children, and individuals
9 who subsist primarily on fish are most at risk for
10 mercury-related health impacts such as
11 neurotoxicity;

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

16 (A) ingestion of breast milk;

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

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

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

1 junction with other scientific knowledge, supports a
2 plausible link between mercury emissions from com-
3 bustion of coal and other fossil fuels and mercury
4 concentrations in air, soil, water, and sediments;

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

10 (B) in 2000, 41 States issued health advisories
11 that warned the public about consuming mercury-
12 tainted fish, as compared to 27 States that issued
13 such advisories in 1993; and

14 (C) the number of mercury advisories nation-
15 wide increased from 899 in 1993 to 2,242 in 2000,
16 an increase of 149 percent;

17 (17) pollution from power plants can be re-
18 duced through adoption of modern technologies and
19 practices, including—

20 (A) methods of combusting coal that are
21 intrinsically more efficient and less polluting,
22 such as pressurized fluidized bed combustion
23 and an integrated gasification combined cycle
24 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) combined heat and power methods of
13 extracting and using heat that would otherwise
14 be wasted, for the purpose of heating or cooling
15 office buildings, providing steam to processing
16 facilities, or otherwise increasing total effi-
17 ciency;

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

22 (19) accurate, long-term, nationwide monitoring
23 of atmospheric acid and mercury deposition is essen-
24 tial for—

25 (A) determining deposition trends;

1 (B) evaluating the local and regional trans-
2 port of emissions; and

3 (C) assessing the impact of emission reduc-
4 tions.

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

6 (1) to protect and preserve the environment
7 while safeguarding health by ensuring that each fos-
8 sil fuel-fired generating unit minimizes air pollution
9 to levels that are technologically feasible through
10 modernization and application of pollution controls;

11 (2) to greatly reduce the quantities of mercury,
12 carbon dioxide, sulfur dioxide, and nitrogen oxides
13 entering the environment from combustion of fossil
14 fuels;

15 (3) to permanently reduce emissions of those
16 pollutants by increasing the combustion heat rate ef-
17 ficiency of fossil fuel-fired generating units to levels
18 achievable through—

19 (A) use of commercially available combus-
20 tion technology, including clean coal tech-
21 nologies such as pressurized fluidized bed com-
22 bustion and an integrated gasification combined
23 cycle system;

24 (B) installation of pollution controls;

1 (C) expanded use of renewable and clean
2 energy sources such as biomass, geothermal,
3 solar, wind, and fuel cells; and

4 (D) promotion of application of combined
5 heat and power technologies;

6 (4)(A) to create financial and regulatory incen-
7 tives to retire thermally inefficient generating units
8 and replace them with new units that employ high-
9 thermal-efficiency combustion technology; and

10 (B) to increase use of renewable and clean en-
11 ergy sources such as biomass, geothermal, solar,
12 wind, and fuel cells;

13 (5) to establish the Clean Air Trust Fund to
14 fund the training, economic development, carbon se-
15 questration, and research, development, and dem-
16 onstration programs established under this Act;

17 (6) to eliminate the “grandfather” loophole in
18 the Clean Air Act relating to sources in operation
19 before the promulgation of standards under section
20 111 of that Act (42 U.S.C. 7411);

21 (7) to express the sense of Congress that per-
22 manent reductions in emissions of greenhouse gases
23 that are accomplished through the retirement of old
24 units and replacement by new units that meet the
25 combustion heat rate efficiency and emission stand-

1 ards specified in this Act should be credited to the
2 utility sector and the owner or operator in any cli-
3 mate change implementation program;

4 (8) to promote permanent and safe disposal of
5 mercury recovered through coal cleaning, flue gas
6 control systems, and other methods of mercury pol-
7 lution control;

8 (9) to increase public knowledge of the sources
9 of mercury exposure and the threat to public health
10 from mercury, particularly the threat to the health
11 of pregnant women and their fetuses, women of
12 childbearing age, and children;

13 (10) to decrease significantly the threat to
14 human health and the environment posed by mer-
15 cury;

16 (11) to provide worker retraining for workers
17 adversely affected by reduced consumption of coal;

18 (12) to provide economic development incentives
19 for communities adversely affected by reduced con-
20 sumption of coal;

21 (13) to promote research concerning renewable
22 energy sources, clean power generation technologies,
23 and carbon sequestration; and

24 (14) to promote government accountability for
25 compliance with the Clean Air Act (42 U.S.C. 7401

1 et seq.) and other emission reduction laws by ensur-
2 ing accurate, long-term, nationwide monitoring of
3 atmospheric acid and mercury deposition.

4 **SEC. 3. DEFINITIONS.**

5 In this Act:

6 (1) ADMINISTRATOR.—The term “Adminis-
7 trator” means the Administrator of the Environ-
8 mental Protection Agency.

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

11 **SEC. 4. COMBUSTION HEAT RATE EFFICIENCY STANDARDS**
12 **FOR FOSSIL FUEL-FIRED GENERATING**
13 **UNITS.**

14 (a) STANDARDS.—

15 (1) IN GENERAL.—Not later than the day that
16 is 10 years after the date of enactment of this Act,
17 each fossil fuel-fired generating unit that commences
18 operation on or before that day shall achieve and
19 maintain, at all operating levels, a combustion heat
20 rate efficiency of not less than 45 percent (based on
21 the higher heating value of the fuel).

22 (2) FUTURE GENERATING UNITS.—Each fossil
23 fuel-fired generating unit that commences operation
24 more than 10 years after the date of enactment of
25 this Act shall achieve and maintain, at all operating

1 levels, a combustion heat rate efficiency of not less
2 than 50 percent (based on the higher heating value
3 of the fuel), unless granted a waiver under sub-
4 section (d).

5 (b) TEST METHODS.—Not later than 2 years after
6 the date of enactment of this Act, the Administrator, in
7 consultation with the Secretary of Energy, shall promul-
8 gate methods for determining initial and continuing com-
9 pliance with this section.

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

15 (d) WAIVER OF COMBUSTION HEAT RATE EFFI-
16 CIENCY STANDARD.—

17 (1) APPLICATION.—The owner or operator of a
18 generating unit that commences operation more than
19 10 years after the date of enactment of this Act may
20 apply to the Administrator for a waiver of the com-
21 bustion heat rate efficiency standard specified in
22 subsection (a)(2) that is applicable to that type of
23 generating unit.

24 (2) ISSUANCE.—The Administrator may grant
25 the waiver only if—

1 (A)(i) the owner or operator of the gener-
2 ating unit demonstrates that the technology to
3 meet the combustion heat rate efficiency stand-
4 ard is not commercially available; or

5 (ii) the owner or operator of the generating
6 unit demonstrates that, despite best technical
7 efforts and willingness to make the necessary
8 level of financial commitment, the combustion
9 heat rate efficiency standard is not achievable
10 at the generating unit; and

11 (B) the owner or operator of the gener-
12 ating unit enters into an agreement with the
13 Administrator to offset by a factor of 1.5 to 1,
14 using a method approved by the Administrator,
15 the emission reductions that the generating unit
16 does not achieve because of the failure to
17 achieve the combustion heat rate efficiency
18 standard specified in subsection (a)(2).

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

1 **SEC. 5. AIR EMISSION STANDARDS FOR FOSSIL FUEL-FIRED**
2 **GENERATING UNITS.**

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

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

16 (1) MERCURY.—Each coal-fired or fuel oil-fired
17 generating unit shall be required to remove 90 per-
18 cent of the mercury contained in the fuel, calculated
19 in accordance with subsection (e).

20 (2) CARBON DIOXIDE.—

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

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

6 (C) COAL-FIRED GENERATING UNITS.—
7 Each coal-fired generating unit shall be re-
8 quired to achieve an emission rate of not more
9 than 1.55 pounds of carbon dioxide per kilowatt
10 hour of net electric power output.

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

13 (A) to remove 95 percent of the sulfur di-
14 oxide that would otherwise be present in the
15 flue gas; and

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

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

21 (A) to remove 90 percent of nitrogen ox-
22 ides that would otherwise be present in the flue
23 gas; and

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

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

8 (1) MERCURY.—Each coal-fired or fuel oil-fired
9 generating unit shall be required to remove 90 per-
10 cent of the mercury contained in the fuel, calculated
11 in accordance with subsection (e).

12 (2) CARBON DIOXIDE.—

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

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

23 (C) COAL-FIRED GENERATING UNITS.—
24 Each coal-fired generating unit shall be re-
25 quired to achieve an emission rate of not more

1 than 1.4 pounds of carbon dioxide per kilowatt
2 hour of net electric power output.

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

5 (A) to remove 95 percent of the sulfur di-
6 oxide that would otherwise be present in the
7 flue gas; and

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

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

13 (A) to remove 90 percent of nitrogen ox-
14 ides that would otherwise be present in the flue
15 gas; and

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

19 (d) PERMIT REQUIREMENT.—Not later than 10
20 years after the date of enactment of this Act, each gener-
21 ating unit shall have a permit issued under title V of the
22 Clean Air Act (42 U.S.C. 7661 et seq.) that requires com-
23 pliance with this section.

24 (e) COMPLIANCE DETERMINATION AND MONI-
25 TORING.—

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

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

13 (3) REPORTING.—

14 (A) IN GENERAL.—Not less often than
15 quarterly, the owner or operator of a generating
16 unit shall submit a pollutant-specific emission
17 report for each pollutant covered by this sec-
18 tion.

19 (B) SIGNATURE.—Each report required
20 under subparagraph (A) shall be signed by a re-
21 sponsible official of the generating unit, who
22 shall certify the accuracy of the report.

23 (C) PUBLIC REPORTING.—The Adminis-
24 trator shall annually make available to the pub-
25 lic, through 1 or more published reports and 1

1 or more forms of electronic media, facility-spe-
2 cific emission data for each generating unit and
3 pollutant covered by this section.

4 (D) CONSUMER DISCLOSURE.—Not later
5 than 2 years after the date of enactment of this
6 Act, the Administrator shall promulgate regula-
7 tions requiring each owner or operator of a gen-
8 erating unit to disclose to residential consumers
9 of electricity generated by the unit, on a regular
10 basis (but not less often than annually) and in
11 a manner convenient to the consumers, data
12 concerning the level of emissions by the gener-
13 ating unit of each pollutant covered by this sec-
14 tion and each air pollutant covered by section
15 111 of the Clean Air Act (42 U.S.C. 7411).

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

18 (1) CAPTURED OR RECOVERED MERCURY.—Not
19 later than 2 years after the date of enactment of
20 this Act, the Administrator shall promulgate regula-
21 tions to ensure that mercury that is captured or re-
22 covered through the use of an emission control, coal
23 cleaning, or another method is disposed of in a man-
24 ner that ensures that—

1 (A) the hazards from mercury are not
 2 transferred from 1 environmental medium to
 3 another; and

4 (B) there is no release of mercury into the
 5 environment.

6 (2) MERCURY-CONTAINING SLUDGES AND
 7 WASTES.—The regulations promulgated by the Ad-
 8 ministrator under paragraph (1) shall ensure that
 9 mercury-containing sludges and wastes are handled
 10 and disposed of in accordance with all applicable
 11 Federal and State laws (including regulations).

12 (g) PUBLIC REPORTING OF FACILITY-SPECIFIC
 13 EMISSION DATA.—

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

19 (2) SOURCE OF DATA.—The emission data shall
 20 be taken from the emission reports submitted under
 21 subsection (e)(3).

22 **SEC. 6. EXTENSION OF RENEWABLE ENERGY PRODUCTION**
 23 **CREDIT.**

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

1 (1) in paragraph (1)—

2 (A) in subparagraph (B), by striking
3 “and”;

4 (B) in subparagraph (C), by striking the
5 period and inserting a comma; and

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

7 “(D) solar power, and

8 “(E) geothermal power.”;

9 (2) in paragraph (3)—

10 (A) in subparagraph (A), by striking
11 “2002” and inserting “2016”;

12 (B) in subparagraph (B), by striking
13 “2002” and inserting “2016”;

14 (C) in subparagraph (C), by striking
15 “2002” and inserting “2016”; and

16 (D) by adding at the end the following:

17 “(D) SOLAR POWER FACILITY.—In the
18 case of a facility using solar power to produce
19 electricity, the term ‘qualified facility’ means
20 any facility owned by the taxpayer which is
21 originally placed in service after December 31,
22 2001, and before January 1, 2016.

23 “(E) GEOTHERMAL POWER FACILITY.—In
24 the case of a facility using geothermal power to
25 produce electricity, the term ‘qualified facility’

1 means any facility owned by the taxpayer which
 2 is originally placed in service after December
 3 31, 2001, and before January 1, 2016.”; and

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

5 “(5) SOLAR POWER.—The term ‘solar power’
 6 means solar energy harnessed through photovoltaic
 7 systems, solar boilers which provide process heat,
 8 and any other means.

9 “(6) GEOTHERMAL POWER.—The term ‘geo-
 10 thermal power’ means thermal energy extracted
 11 from the earth for the purposes of producing elec-
 12 tricity.”.

13 **SEC. 7. MEGAWATT HOUR GENERATION FEES.**

14 (a) IN GENERAL.—Chapter 38 of the Internal Rev-
 15 enue Code of 1986 (relating to miscellaneous excise taxes)
 16 is amended by inserting after subchapter D the following:

17 **“Subchapter E—Megawatt Hour Generation**
 18 **Fees**

“Sec. 4691. Imposition of fees.

19 **“SEC. 4691. IMPOSITION OF FEES.**

20 “(a) TAX IMPOSED.—There is hereby imposed on
 21 each covered fossil fuel-fired generating unit a tax equal
 22 to 30 cents per megawatt hour of electricity produced by
 23 the covered fossil fuel-fired generating unit.

1 “(b) ADJUSTMENT OF RATES.—Not less often than
 2 once every 2 years beginning after 2005, 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 any succeeding calendar year to ensure that the
 7 Clean Air Trust Fund established by section 9511 has suf-
 8 ficient amounts to fully fund the activities described in
 9 section 9511(c).

10 “(c) PAYMENT OF TAX.—The tax imposed by this
 11 section shall be paid quarterly by the owner or operator
 12 of each covered fossil fuel-fired generating unit.

13 “(d) COVERED FOSSIL FUEL-FIRED GENERATING
 14 UNIT.—The term ‘covered fossil fuel-fired generating unit’
 15 means an electric utility generating unit which—

16 “(1) is powered by fossil fuels;

17 “(2) has a generating capacity of 5 or more
 18 megawatts; and

19 “(3) because of the date on which the gener-
 20 ating unit commenced commercial operation, is not
 21 subject to all regulations promulgated under section
 22 111 of the Clean Air Act (42 U.S.C. 7411).”.

23 (b) CONFORMING AMENDMENT.—The table of sub-
 24 chapters for such chapter 38 is amended by inserting after
 25 the item relating to subchapter D the following:

“SUBCHAPTER E. Megawatt hour generation fees.”.

1 (c) EFFECTIVE DATE.—The amendments made by
2 this section shall apply to electricity produced in calendar
3 years beginning after December 31, 2003.

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

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

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

9 “(a) CREATION OF TRUST FUND.—There is estab-
10 lished in the Treasury of the United States a trust fund
11 to be known as the ‘Clean Air Trust Fund’ (hereafter re-
12 ferred to in this section as the ‘Trust Fund’), consisting
13 of such amounts as may be appropriated or credited to
14 the Trust Fund as provided in this section or section
15 9602(b).

16 “(b) TRANSFERS TO TRUST FUND.—There are here-
17 by appropriated to the Trust Fund amounts equivalent to
18 the taxes received in the Treasury under section 4691.

19 “(c) EXPENDITURES FROM TRUST FUND.—Amounts
20 in the Trust Fund shall be available, without further Act
21 of appropriation, upon request by the head of the appro-
22 priate Federal agency in such amounts as the agency head
23 determines are necessary—

1 “(iv) any 45-percent efficient fossil
2 fuel-fired generating unit.”; and

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

4 “(F) 12-YEAR PROPERTY.—The term ‘12-
5 year property’ includes any 50-percent efficient
6 fossil fuel-fired generating unit.”.

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

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

12 “(A) 50-PERCENT EFFICIENT FOSSIL
13 FUEL-FIRED GENERATING UNIT.—The term
14 ‘50-percent efficient fossil fuel-fired generating
15 unit’ means any property used in an investor-
16 owned fossil fuel-fired generating unit pursuant
17 to a plan approved by the Secretary, in con-
18 sultation with the Administrator of the Envi-
19 ronmental Protection Agency, to place into
20 service such a unit which is in compliance with
21 sections 4(a)(2) and 5(c) of the Clean Power
22 Plant and Modernization Act of 2001, as in ef-
23 fect on the date of enactment of this paragraph.

24 “(B) 45-PERCENT EFFICIENT FOSSIL
25 FUEL-FIRED GENERATING UNIT.—The term

1 tary value of the depreciation deduction that would
2 be realized by reason of section 168(c)(3)(E) of the
3 Internal Revenue Code of 1986 by a similarly-situ-
4 ated investor-owned generating unit over that pe-
5 riod; and

6 (2) is in compliance with sections 4(a)(2) and
7 5(c) shall, over a 12-year period, be eligible for par-
8 tial reimbursement through annual grants made by
9 the Secretary of the Treasury, in consultation with
10 the Administrator, in an amount equal to the mone-
11 tary value of the depreciation deduction that would
12 be realized by reason of section 168(c)(3)(D) of such
13 Code by a similarly-situated investor-owned gener-
14 ating unit over that period.

15 **SEC. 11. RECOGNITION OF PERMANENT EMISSION REDUC-**
16 **TIONS IN FUTURE CLIMATE CHANGE IMPLE-**
17 **MENTATION PROGRAMS.**

18 It is the sense of Congress that—

19 (1) permanent reductions in emissions of car-
20 bon dioxide and nitrogen oxides that are accom-
21 plished through the retirement of old generating
22 units and replacement by new generating units that
23 meet the combustion heat rate efficiency and emis-
24 sion standards specified in this Act, or through re-
25 placement of old generating units with nonpolluting

1 renewable power generation technologies, should be
2 credited to the utility sector, and to the owner or op-
3 erator that retires or replaces the old generating
4 unit, in any climate change implementation program
5 enacted by Congress;

6 (2) the base year for calculating reductions
7 under a program described in paragraph (1) should
8 be the calendar year preceding the calendar year in
9 which this Act is enacted; and

10 (3) a reasonable portion of any monetary value
11 that may accrue from the crediting described in
12 paragraph (1) should be passed on to utility cus-
13 tomers.

14 **SEC. 12. RENEWABLE AND CLEAN POWER GENERATION**
15 **TECHNOLOGIES.**

16 (a) IN GENERAL.—Under the Renewable Energy and
17 Energy Efficiency Technology Act of 1989 (42 U.S.C.
18 12001 et seq.), the Secretary of Energy shall fund re-
19 search and development programs and commercial dem-
20 onstration projects and partnerships to demonstrate the
21 commercial viability and environmental benefits of electric
22 power generation from—

23 (1) biomass (excluding unseparated municipal
24 solid waste), geothermal, solar, and wind tech-
25 nologies; and

1 (2) fuel cells.

2 (b) TYPES OF PROJECTS.—Demonstration projects
3 may include solar power tower plants, solar dishes and en-
4 gines, co-firing of biomass with coal, biomass modular sys-
5 tems, next-generation wind turbines and wind turbine
6 verification projects, geothermal energy conversion, and
7 fuel cells.

8 (c) AUTHORIZATION OF APPROPRIATIONS.—In addi-
9 tion to amounts made available under any other law, there
10 is authorized to be appropriated to carry out this section
11 \$75,000,000 for each of fiscal years 2003 through 2012.

12 **SEC. 13. CLEAN COAL, ADVANCED GAS TURBINE, AND COM-**
13 **BINED HEAT AND POWER DEMONSTRATION**
14 **PROGRAM.**

15 (a) IN GENERAL.—Under subtitle B of title XXI of
16 the Energy Policy Act of 1992 (42 U.S.C. 13471 et seq.),
17 the Secretary of Energy shall establish a program to fund
18 projects and partnerships designed to demonstrate the ef-
19 ficiency and environmental benefits of electric power gen-
20 eration from—

21 (1) clean coal technologies, such as pressurized
22 fluidized bed combustion and an integrated gasifi-
23 cation combined cycle system;

1 (2) advanced gas turbine technologies, such as
2 flexible midsized gas turbines and baseload utility
3 scale applications; and

4 (3) combined heat and power technologies.

5 (b) SELECTION CRITERIA.—

6 (1) IN GENERAL.—Not later than 1 year after
7 the date of enactment of this Act, the Secretary of
8 Energy shall promulgate criteria and procedures for
9 selection of demonstration projects and partnerships
10 to be funded under subsection (a).

11 (2) REQUIRED CRITERIA.—At a minimum, the
12 selection criteria shall include—

13 (A) the potential of a proposed demonstra-
14 tion project or partnership to reduce or avoid
15 emissions of pollutants covered by section 5 and
16 air pollutants covered by section 111 of the
17 Clean Air Act (42 U.S.C. 7411); and

18 (B) the potential commercial viability of
19 the proposed demonstration project or partner-
20 ship.

21 (c) AUTHORIZATION OF APPROPRIATIONS.—

22 (1) IN GENERAL.—In addition to amounts
23 made available under any other law, there is author-
24 ized to be appropriated to carry out this section

1 \$75,000,000 for each of fiscal years 2003 through
2 2012.

3 (2) DISTRIBUTION.—The Secretary shall make
4 reasonable efforts to ensure that, under the program
5 established under this section, the same amount of
6 funding is provided for demonstration projects and
7 partnerships under each of paragraphs (1), (2), and
8 (3) of subsection (a).

9 **SEC. 14. EVALUATION OF IMPLEMENTATION OF THIS ACT**
10 **AND OTHER STATUTES.**

11 (a) IN GENERAL.—Not later than 2 years after the
12 date of enactment of this Act, the Secretary of Energy,
13 in consultation with the Chairman of the Federal Energy
14 Regulatory Commission and the Administrator, shall sub-
15 mit to Congress a report on the implementation of this
16 Act.

17 (b) IDENTIFICATION OF CONFLICTING LAW.—The
18 report shall identify any provision of the Energy Policy
19 Act of 1992 (Public Law 102–486), the Energy Supply
20 and Environmental Coordination Act of 1974 (15 U.S.C.
21 791 et seq.), the Public Utility Regulatory Policies Act
22 of 1978 (16 U.S.C. 2601 et seq.), or the Powerplant and
23 Industrial Fuel Use Act of 1978 (42 U.S.C. 8301 et seq.),
24 or the amendments made by those Acts, that conflicts with
25 the intent or efficient implementation of this Act.

1 (c) RECOMMENDATIONS.—The report shall include
2 recommendations from the Secretary of Energy, the
3 Chairman of the Federal Energy Regulatory Commission,
4 and the Administrator for legislative or administrative
5 measures to harmonize and streamline the statutes speci-
6 fied in subsection (b) and the regulations implementing
7 those statutes.

8 **SEC. 15. ASSISTANCE FOR WORKERS ADVERSELY AF-**
9 **FFECTED BY REDUCED CONSUMPTION OF**
10 **COAL.**

11 In addition to amounts made available under any
12 other law, there is authorized to be appropriated
13 \$75,000,000 for each of fiscal years 2003 through 2015
14 to provide assistance, under the economic dislocation and
15 worker adjustment assistance program of the Department
16 of Labor authorized by title III of the Job Training Part-
17 nership Act (29 U.S.C. 1651 et seq.), to coal industry
18 workers who are terminated from employment as a result
19 of reduced consumption of coal by the electric power gen-
20 eration industry.

1 **SEC. 16. COMMUNITY ECONOMIC DEVELOPMENT INCEN-**
2 **TIVES FOR COMMUNITIES ADVERSELY AF-**
3 **FECTED BY REDUCED CONSUMPTION OF**
4 **COAL.**

5 In addition to amounts made available under any
6 other law, there is authorized to be appropriated
7 \$75,000,000 for each of fiscal years 2003 through 2012
8 to provide assistance, under the economic adjustment pro-
9 gram of the Department of Commerce authorized by the
10 Public Works and Economic Development Act of 1965 (42
11 U.S.C. 3121 et seq.), to assist communities adversely af-
12 fected by reduced consumption of coal by the electric
13 power generation industry.

14 **SEC. 17. CARBON SEQUESTRATION.**

15 (a) **CARBON SEQUESTRATION STRATEGY.**—In addi-
16 tion to amounts made available under any other law, there
17 is authorized to be appropriated to the Environmental
18 Protection Agency and the Department of Energy for each
19 of fiscal years 2003 through 2005 a total of \$15,000,000
20 to conduct research and development activities in basic
21 and applied science in support of development by Sep-
22 tember 30, 2005, of a carbon sequestration strategy that
23 is designed to offset all growth in carbon dioxide emissions
24 in the United States after 2010.

25 (b) **METHODS FOR BIOLOGICALLY SEQUESTERING**
26 **CARBON DIOXIDE.**—In addition to amounts made avail-

1 able under any other law, there is authorized to be appro-
2 priated to the Environmental Protection Agency and the
3 Department of Agriculture for each of fiscal years 2003
4 through 2012 a total of \$30,000,000 to carry out soil res-
5 toration, tree planting, wetland protection, and other
6 methods of biologically sequestering carbon dioxide.

7 (c) LIMITATION.—A project carried out using funds
8 made available under this section shall not be used to off-
9 set any emission reduction required under any other provi-
10 sion of this Act.

11 **SEC. 18. ATMOSPHERIC MONITORING.**

12 (a) OPERATIONAL SUPPORT.—In addition to
13 amounts made available under any other law, there are
14 authorized to be appropriated for each of fiscal years 2003
15 through 2012—

16 (1) for operational support of the National At-
17 mospheric Deposition Program National Trends
18 Network—

19 (A) \$2,000,000 to the United States Geo-
20 logical Survey;

21 (B) \$600,000 to the Environmental Pro-
22 tection Agency;

23 (C) \$600,000 to the National Park Serv-
24 ice; and

25 (D) \$400,000 to the Forest Service;

1 (2) for operational support of the National At-
2 mospheric Deposition Program Mercury Deposition
3 Network—

4 (A) \$400,000 to the Environmental Pro-
5 tection Agency;

6 (B) \$400,000 to the United States Geo-
7 logical Survey;

8 (C) \$100,000 to the National Oceanic and
9 Atmospheric Administration; and

10 (D) \$100,000 to the National Park Serv-
11 ice;

12 (3) for the National Atmospheric Deposition
13 Program Atmospheric Integrated Research Moni-
14 toring Network \$1,500,000 to the National Oceanic
15 and Atmospheric Administration;

16 (4) for the Clean Air Status and Trends Net-
17 work \$5,000,000 to the Environmental Protection
18 Agency; and

19 (5) for the Temporally Integrated Monitoring of
20 Ecosystems and Long-Term Monitoring Program
21 \$2,500,000 to the Environmental Protection Agency.

22 (b) MODERNIZATION.—In addition to amounts made
23 available under any other law, there are authorized to be
24 appropriated—

1 (1) for equipment and site modernization of the
2 National Atmospheric Deposition Program National
3 Trends Network \$6,000,000 to the Environmental
4 Protection Agency;

5 (2) for equipment and site modernization and
6 network expansion of the National Atmospheric
7 Deposition Program Mercury Deposition Network
8 \$2,000,000 to the Environmental Protection Agency;

9 (3) for equipment and site modernization and
10 network expansion of the National Atmospheric
11 Deposition Program Atmospheric Integrated Re-
12 search Monitoring Network \$1,000,000 to the Na-
13 tional Oceanic and Atmospheric Administration; and

14 (4) for equipment and site modernization and
15 network expansion of the Clean Air Status and
16 Trends Network \$4,600,000 to the Environmental
17 Protection Agency.

18 (c) AVAILABILITY OF AMOUNTS.—Each of the
19 amounts appropriated under subsection (b) shall remain
20 available until expended.

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