

108TH CONGRESS
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S. 582

To authorize the Department of Energy to develop and implement an accelerated research and development program for advanced clean coal technologies for use in coal-based electricity generating facilities and to amend the Internal Revenue Code of 1986 to provide financial incentives to encourage the retrofitting, repowering, or replacement of coal-based electricity generating facilities to protect the environment and improve efficiency and encourage the early commercial application of advanced clean coal technologies, so as to allow coal to help meet the growing need of the United States for the generation of reliable and affordable electricity.

IN THE SENATE OF THE UNITED STATES

MARCH 10, 2003

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

A BILL

To authorize the Department of Energy to develop and implement an accelerated research and development program for advanced clean coal technologies for use in coal-based electricity generating facilities and to amend the Internal Revenue Code of 1986 to provide financial incentives to encourage the retrofitting, repowering, or replacement of coal-based electricity generating facilities to protect the environment and improve efficiency and encourage the early commercial application of advanced clean coal technologies, so as to allow coal to help meet

the growing need of the United States for the generation of reliable and affordable electricity.

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.**

4 (a) SHORT TITLE.—This Act may be cited as the
 5 “Coal Energy Research Development and Demonstration
 6 Act of 2003”.

7 **SEC. 2. TABLE OF CONTENTS.**

Sec. 1. Short title.
 Sec. 2. Table of contents.

TITLE I—ACCELERATED TECHNOLOGY RESEARCH AND DEVELOPMENT PROGRAM FOR ADVANCED CLEAN COAL TECHNOLOGY

Sec. 101. Definitions.
 Sec. 102. Cost and performance goals.
 Sec. 103. Study.
 Sec. 104. Technology research and development program.
 Sec. 105. Authorization of appropriations.

TITLE II—CLEAN COAL POWER INITIATIVE

Sec. 201. Authorization of appropriations.
 Sec. 202. Clean coal power initiative criteria.
 Sec. 203. Report.
 Sec. 204. Clean coal centers of excellence.

TITLE III—CLEAN COAL INCENTIVES

Subtitle A—Credit for Emission Reductions and Efficiency Improvements in Existing Coal-Based Electricity Generation Facilities

Sec. 301. Credit for production from a qualifying clean coal technology unit.

Subtitle B—Incentives for Early Commercial Applications of Advanced Clean Coal Technologies

Sec. 302. Credit for investment in qualifying advanced clean coal technology.
 Sec. 303. Credit for production from a qualifying advanced clean coal technology unit.

Subtitle C—Treatment of persons Not Able To Use Entire Credit

Sec. 304. Treatment of persons not able to use entire credit.

1 **TITLE I—ACCELERATED TECH-**
2 **NOLOGY RESEARCH AND DE-**
3 **VELOPMENT PROGRAM FOR**
4 **ADVANCED CLEAN COAL**
5 **TECHNOLOGY**

6 **SEC. 101. DEFINITIONS.**

7 In this title:

8 (a) **COST AND PERFORMANCE GOALS.**—The term
9 “cost and performance goals” means the cost and per-
10 formance goals established under section 102.

11 (b) **SECRETARY.**—The term “Secretary” means the
12 Secretary of Energy.

13 **SEC. 102. COST AND PERFORMANCE GOALS.**

14 (a) **IN GENERAL.**—The Secretary shall perform an
15 assessment that identifies cost and performance goals of
16 technologies that would permit the continued cost-com-
17 petitive use of coal for electricity generation, as chemical
18 feedstocks, and as transportation fuel in 2007, 2015 and
19 the years after 2020.

20 (b) **CONSULTATION.**—In establishing the cost and
21 performance goals, the Secretary shall—

22 (1) consider activities and studies undertaken
23 to date by industry in cooperation with the Depart-
24 ment of Energy in support of such assessment; and

1 (2) consult with interested entities, including
2 coal producers, industries using coal, organizations
3 to promote coal and advanced coal technologies, en-
4 vironmental organizations and organizations rep-
5 resenting workers.

6 (c) **TIMING.**—The Secretary shall—

7 (1) Not later than 120 days after the date of
8 enactment of this Act, issue a set of draft cost and
9 performance goals for public comment; and

10 (2) not later than 180 days after the date of
11 enactment of this Act, after taking into consider-
12 ation any public comments received, submit to Con-
13 gress the final cost and performance goals.

14 **SEC. 103. STUDY.**

15 (a) **IN GENERAL.**—Not later than 1 year after the
16 date of enactment of this Act, and once every 2 years
17 thereafter through 2016, the Secretary, in cooperation
18 with other appropriate federal agencies, shall conduct a
19 study to—

20 (1) identify technologies that, by themselves or
21 in combination with other technologies, may be capa-
22 ble of achieving the cost and performance goals;

23 (2) assess the costs that would be incurred by,
24 and the period of time that would be required for,
25 the development and demonstration of technologies

1 that, by themselves or in combination with other
2 technologies, contribute to the achievement of the
3 cost and performance goals;

4 (3) develop recommendations for technology de-
5 velopment programs, which the Department of En-
6 ergy could carry out in cooperation with industry, to
7 develop and demonstrate technologies that, by them-
8 selves or in combination with other technologies,
9 achieves the cost and performance goals; and

10 (4) develop recommendations for additional au-
11 thorities required to achieve the cost and perform-
12 ance goals, and review and recommend changes, if
13 any, to those cost and performance goals if the Sec-
14 retary determines that such changes are necessary
15 as a result of ongoing research, development and
16 demonstration of technologies.

17 (b) COOPERATION.—In carrying out this section, the
18 Secretary shall give due weight to the expert advice of rep-
19 resentatives of the entities described in section 102(b)(2).

20 **SEC. 104. TECHNOLOGY RESEARCH, DEVELOPMENT AND**
21 **DEMONSTRATION PROGRAM.**

22 (a) IN GENERAL.—The Secretary shall carry out a
23 technology research, development and demonstration pro-
24 gram to facilitate production and generation of coal-based
25 power through methods and equipment under—

1 (1) this title;

2 (2) the Federal Nonnuclear Energy Research
3 and Development Act of 1974 (42 U.S.C. 5901 et
4 seq.);

5 (3) the Energy Reorganization Act of 1974 (42
6 U.S.C. 5801 et seq.); and

7 (4) title XVI of the Energy Policy Act of 1992
8 (42 U.S.C. 13381 et seq.).

9 (b) CONDITIONS.—The program described in sub-
10 section (a) shall be designed to achieve the cost and per-
11 formance goals required by Section 102.

12 **SEC. 105. AUTHORIZATION OF APPROPRIATIONS.**

13 (a) IN GENERAL.—There are authorized to be appro-
14 priated to the Secretary \$200,000,000 for fiscal year
15 2004, \$210,000,000 for fiscal year 2005, and
16 \$220,500,000 for fiscal year 2006, to remain available
17 until expended, for coal and related technologies research
18 and development programs, which shall include—

19 (1) innovations for existing plants;

20 (2) integrated gasification combined cycle;

21 (3) advanced combustion systems;

22 (4) turbines for synthesis gas derived from coal;

23 (5) carbon capture and sequestration research
24 and development;

1 (6) coal-derived transportation fuels and chemi-
2 cals;

3 (7) solid fuels and feedstocks; and

4 (8) advanced coal-related research.

5 (b) LIMIT ON USE OF FUNDS.—

6 (1) Prior to the use of funds authorized by this
7 section, the Secretary shall transmit to the Congress
8 a report describing the proposed use of funds and
9 containing a plan that includes—

10 (A) a detailed description of how proposals,
11 if any, will be solicited and evaluated, including
12 a list of all activities expected to be undertaken;

13 (B) a detailed list of technical milestones
14 for each coal and related technology that will be
15 pursued; and

16 (C) a description of how the programs au-
17 thorized in this section will be carried out so as
18 to complement and not duplicate activities au-
19 thorized under the Clean Coal Power Initiative
20 authorized under title II.

21 (2) Thirty days shall elapse from receipt of the
22 report required by this subsection after which the
23 Secretary may then use the authorization of appro-
24 priations provided by this section.

1 **TITLE II—CLEAN COAL POWER**
2 **INITIATIVE**

3 **SEC. 201. AUTHORIZATION OF APPROPRIATIONS.**

4 (a) CLEAN COAL POWER INITIATIVE.—Except as
5 provided in subsection (b), there are authorized to be ap-
6 propriated to the Secretary to carry out the activities au-
7 thorized by this title \$200,000,000 for each of the fiscal
8 years 2003 through 2011, to remain available until ex-
9 pended.

10 (b) LIMIT ON USE OF FUNDS.—

11 (1) Notwithstanding subsection (a), the Sec-
12 retary is authorized to obligate the use of funds
13 prior to the date authorized herein, subject to appro-
14 priations.

15 (2) The Secretary shall transmit to the Com-
16 mittee on Energy and Commerce and the Committee
17 on Science of the House of Representatives, and to
18 the Senate, a report, with respect to subsection (a),
19 containing—

20 (A) a detailed assessment of whether the
21 aggregate funding levels provided under sub-
22 section (a) are the appropriate funding levels
23 for that program;

1 (B) a detailed description of how proposals
2 will be solicited and evaluated, including a list
3 of all activities expected to be undertaken;

4 (C) a detailed list of technical milestones
5 for each coal and related technology that will be
6 pursued; and

7 (D) a detailed description of how the pro-
8 gram will avoid problems enumerated in Gen-
9 eral Accounting Office reports on the Clean
10 Coal Technology Program, including problems
11 that have resulted in unspent funds and
12 projects that failed either financially or scientif-
13 ically.

14 (3) Thirty days elapse from receipt of the re-
15 port required by this subsection after which the Sec-
16 retary may then use the authorization of appropria-
17 tions provided by this section.

18 (c) APPLICABILITY.—Subsection (b) shall not apply
19 to any project begun before September 30, 2003.

20 **SEC. 202. CLEAN COAL POWER INITIATIVE CRITERIA.**

21 (a) IN GENERAL.—The Secretary shall not provide
22 funding under this title for any project that does not ad-
23 vance efficiency, environmental performance, and cost
24 competitiveness well beyond the level of technologies that

1 are in operation or have been demonstrated as of the date
2 of the enactment of this Act.

3 (b) TECHNICAL CRITERIA FOR CLEAN COAL POWER
4 INITIATIVE.—

5 (1) GASIFICATION.—

6 (A) In allocating the funds made available
7 under section 201(a), the Secretary shall ensure
8 that not less than 55 percent, but not more
9 than 80 percent, of the funds are used for coal-
10 based gasification technologies, coal based
11 projects that includes the separation and cap-
12 ture of carbon dioxide, or coal based projects
13 that include gasification combined cycle, gasifi-
14 cation fuel cells, gasification coproduction, or
15 hybrid gasification/combustion.

16 (B) The Secretary shall set technical mile-
17 stones specifying emissions levels that coal gas-
18 ification projects must be designed to and rea-
19 sonably expected to achieve. The milestones
20 shall get more restrictive through the life of the
21 program. The milestones shall be designed to
22 achieve by 2020 coal gasification projects
23 able—

24 (i) to remove 99 percent of sulfur di-
25 oxide;

1 (ii) to emit no more than .05 lbs of
2 NO_x per million BTU;

3 (iii) to achieve substantial reductions
4 in mercury emissions; and

5 (iv) to achieve a thermal efficiency
6 of—

7 (I) 60 percent for coal of more
8 than 9,000 Btu;

9 (II) 59 percent for coal of 7,000
10 to 9,000 Btu; and

11 (III) 57 percent for coal of less
12 than 7,000 Btu.

13 (2) OTHER PROJECTS.—For projects not de-
14 scribed in paragraph (1), the Secretary shall set
15 technical milestones specifying emissions levels that
16 the projects must be designed to and reasonably ex-
17 pected to achieve. The milestones shall get more re-
18 strictive through the life of the program. The mile-
19 stones shall be designed to achieve by 2010 projects
20 able—

21 (A) to remove 97 percent of sulfur dioxide;

22 (B) to emit no more than .08 lbs of NO_x
23 per million BTU;

24 (C) to achieve substantial reductions in
25 mercury emissions; and

- 1 (D) to achieve a thermal efficiency of—
2 (i) 45 percent for coal of more than
3 9,000 Btu;
4 (ii) 44 percent for coal 7,000 to 9,000
5 Btu; and
6 (iii) 42 percent for coal of less than
7 7,000 Btu.

8 (3) CONSULTATION.—Before setting the tech-
9 nical milestones under paragraphs (1)(B) and (2),
10 the Secretary shall consult with the Administrator of
11 the Environmental Protection Agency and interested
12 entities, including coal producers, industries using
13 coal, organizations to promote coal or advanced coal
14 technologies, environmental organizations, and orga-
15 nizations representing workers.

16 (4) EXISTING UNITS.—In the case of projects
17 at existing units, in lieu of the thermal efficiency re-
18 quirements set forth in paragraph (1)(B)(iv) and
19 (2)(D), the projects shall be designed to achieve an
20 overall thermal design efficiency improvement com-
21 pared to the efficiency of the unit as operated, of not
22 less than—

- 23 (A) 7 percent for coal of more than 9,000
24 Btu;

1 (B) 6 percent for coal of 7,000 to 9,000
2 Btu; or

3 (C) 4 percent for coal of less than 7,000
4 Btu.

5 (c) FINANCIAL CRITERIA.—The Secretary shall not
6 provide a funding award under this title unless the recipi-
7 ent has documented to the satisfaction of the Secretary
8 that—

9 (1) the award recipient is financially viable
10 without the receipt of additional Federal funding;

11 (2) the recipient will provide sufficient informa-
12 tion to the Secretary for the Secretary to ensure
13 that the award funds are spent efficiently and effec-
14 tively; and

15 (3) a market exists for the technology being
16 demonstrated or applied, as evidenced by statements
17 of interest in writing from potential purchasers of
18 the technology.

19 (d) FINANCIAL ASSISTANCE.—The Secretary shall
20 provide financial assistance to projects that meet the re-
21 quirements of subsections (a), (b), and (c) and are likely
22 to—

23 (1) achieve overall cost reductions in the utiliza-
24 tion of coal to generate useful forms of energy;

1 (2) improve the competitiveness of coal among
2 various forms of energy in order to maintain a diver-
3 sity of fuel choices in the United States to meet elec-
4 tricity generation requirements; and

5 (3) demonstrate methods and equipment that
6 are applicable to 25 percent of the electricity gener-
7 ating facilities that use coal as the primary feedstock
8 as of the date of the enactment of this Act.

9 (e) FEDERAL SHARE.—The Federal share of the cost
10 of a coal or related technology project funded by the Sec-
11 retary shall not exceed 50 percent. The Federal share may
12 repaid over a reasonable period of time as agreed upon
13 with the Secretary.

14 (f) APPLICABILITY.—No technology, or level of emis-
15 sion reduction, shall be treated as adequately dem-
16 onstrated for purposes of section 111 of the Clean Air Act,
17 achievable for purposes of section 169 of that Act, or
18 achievable in practice for purposes of section 171 of that
19 Act solely by reason of the use of such technology, or the
20 achievement of such emission reduction, by one or more
21 facilities receiving assistance under this title.

22 **SEC. 203. REPORT.**

23 (a) Not later than 1 year after the date of the enact-
24 ment of this Act, and once every 2 years thereafter
25 through 2011, the Secretary, in consultation with other

1 appropriate Federal agencies, shall transmit to the Com-
2 mittee on Energy and Commerce and the Committee on
3 Science of the House of Representatives, and to the Sen-
4 ate, a report describing—

5 (1) the technical milestones set forth in section
6 202 and how those milestones ensure progress to-
7 ward meeting the requirements of subsections
8 (b)(1)(B) and (b)(2) of section 202; and

9 (2) the status of projects funded under this
10 title.

11 **SEC. 204. CLEAN COAL CENTERS OF EXCELLENCE.**

12 As part of the program authorized in section 201,
13 the Secretary shall award competitive, merit-based grants
14 to universities for the establishment of Centers of Excel-
15 lence for Energy Systems of the Future. The Secretary
16 shall provide grants to universities that can show the
17 greatest potential for advancing new clean coal tech-
18 nologies.

1 **TITLE III—CLEAN COAL**
 2 **INCENTIVES**
 3 **Subtitle A—Credit for Emission Re-**
 4 **ductions and Efficiency Im-**
 5 **provements in Existing Coal-**
 6 **Based Electricity Generation**
 7 **Facilities**

8 **SEC. 301. CREDIT FOR PRODUCTION FROM A QUALIFYING**
 9 **CLEAN COAL TECHNOLOGY UNIT.**

10 (a) CREDIT FOR PRODUCTION FROM A QUALIFYING
 11 CLEAN COAL TECHNOLOGY UNIT.—Subpart D of part IV
 12 of subchapter A of chapter 1 of the Internal Revenue Code
 13 of 1986 (relating to business related credits) is amended
 14 by adding at the end the following new section:

15 **“SEC. 451. CREDIT FOR PRODUCTION FROM A QUALIFYING**
 16 **CLEAN COAL TECHNOLOGY UNIT.**

17 “(a) GENERAL RULE.—For purposes of section 38,
 18 the qualifying clean coal technology production credit of
 19 any taxpayer for any taxable year is equal to the product
 20 of—

21 “(1) the applicable amount of clean technology
 22 production credit, multiplied by

23 “(2) the applicable percentage of the kilowatt
 24 hours of electricity produced and the equivalent heat
 25 value of other fuels or chemicals produced by the

1 taxpayer during such taxable year at a qualifying
2 clean coal technology unit, but only if such produc-
3 tion occurs during the 10-year period beginning on
4 the date the unit was returned to service after be-
5 coming a qualifying clean coal technology unit.

6 “(b) APPLICABLE AMOUNT.—

7 “(1) IN GENERAL.—For purposes of this sec-
8 tion, the applicable amount of clean coal technology
9 production credit is equal to \$0.0034 per kilowatt-
10 hour of electricity produced and the equivalent heat
11 value of other fuels or chemicals produced from not
12 more than 300,000 kilowatts of nameplate capacity
13 at the same qualifying clean coal technology unit.

14 “(2) INFLATION ADJUSTMENT.—For calendar
15 years after 2003, the applicable amount of clean coal
16 technology production credit shall be adjusted by
17 multiplying such amount by the inflation adjustment
18 factor for the calendar year in which the amount is
19 applied. If any amount as increased under the pre-
20 ceding sentence is not a multiple of 0.01 cent, such
21 amount shall be rounded to the nearest multiple of
22 0.01 cent.

23 “(c) APPLICABLE PERCENTAGE.—For purposes of
24 this section, with respect to any qualifying clean coal tech-
25 nology unit, the applicable percentage is the percentage

1 equal to the ratio which the portion of the national mega-
2 watt capacity limitation allocated to the taxpayer with re-
3 spect to such unit under subsection (e) bears to the total
4 megawatt capacity of such unit.

5 “(d) DEFINITIONS AND SPECIAL RULES.—For pur-
6 poses of this section—

7 “(1) QUALIFYING CLEAN COAL TECHNOLOGY
8 UNIT.—The term ‘qualifying clean coal technology
9 unit’ means a clean coal technology unit of the tax-
10 payer which—

11 “(A) on the date of the enactment of this
12 section was a coal-based electricity generating
13 steam generator-turbine unit which was not a
14 clean coal technology unit;

15 “(B) has a nameplate capacity rating of
16 not more than 300,000 kilowatts as of the date
17 of enactment of this section;

18 “(C) becomes a clean coal technology unit
19 as the result of the retrofitting, repowering, or
20 replacement of the unit with clean coal tech-
21 nology, which nameplate capacity may then be
22 greater than 300,000 kilowatts, during the 10-
23 year period beginning on the date of the enact-
24 ment of this section;

1 “(D) is not receiving nor is scheduled to
2 receive funding under the Clean Coal Tech-
3 nology Program, the Power Plant Improvement
4 Initiative, or the Clean Coal Power Initiative
5 administered by the Secretary of Energy; and

6 “(E) receives an allocation of a portion of
7 the national megawatt capacity limitation under
8 subsection (e), which shall not exceed 300,000
9 kilowatts.

10 “(2) CLEAN COAL TECHNOLOGY UNIT.—The
11 term ‘clean coal technology unit’ means a unit
12 which—

13 “(A) uses clean coal technology, including
14 advanced pulverized coal or atmosphere fluid-
15 ized bed combustion, pressurized fluidized bed
16 combustion, integrated gasification combined
17 cycle, or any other technology for the produc-
18 tion of electricity;

19 “(B) uses at least 75 percent coal to
20 produce 50 percent or more of its thermal out-
21 put as electricity;

22 “(C) has a design net heat rate of at least
23 500 less than that of such unit as described in
24 paragraph (1)(A);

1 “(D) has a maximum design net heat rate
2 of not more than 9,500; and

3 “(E) meets the pollution control require-
4 ments of paragraph (3).

5 “(3) POLLUTION CONTROL REQUIREMENTS.—

6 “(A) IN GENERAL.—A unit meets the re-
7 quirements of this paragraph if—

8 “(i) its emissions of sulfur dioxide, ni-
9 trogen oxide, or particulates meet the
10 lower of the emission levels for each such
11 emission specified in—

12 “(I) subparagraph (B), or

13 “(II) the new source performance
14 standards of the Clean Air Act (42
15 U.S.C. 7411) which are in effect for
16 the category of source at the time of
17 the retrofitting, repowering, or re-
18 placement of the unit, and

19 “(ii) its emissions do not exceed any
20 relevant emission level specified by regula-
21 tion pursuant to the hazardous air pollut-
22 ant requirements of the Clean Air Act (42
23 U.S.C. 7412) is effect at the time of the
24 retrofitting, repowering, or replacement.

1 “(B) SPECIFIC LEVELS.—The levels speci-
2 fied in this subparagraph are—

3 “(i) in the case of sulfur dioxide emis-
4 sions, 50 percent of the sulfur dioxide
5 emission levels specified in the new source
6 performance standards of the Clean Air
7 Act (42 U.S.C. 7411) in effect on the date
8 of the enactment of this section for the
9 category of source,

10 “(ii) in the case of nitrogen oxide
11 emissions—

12 “(I) 0.1 pound per million Btu of
13 heat input if the unit is not a cyclone-
14 fired boiler, and

15 “(II) if the unit is a cyclone-fired
16 boiler, 15 percent of the uncontrolled
17 nitrogen oxide emissions from such
18 boilers, and

19 “(iii) in the case of particulate emis-
20 sions, 0.02 pound per million Btu of heat
21 input.

22 “(4) DESIGN NET HEAT RATE.—The design net
23 heat rate with respect to any unit, measured in Btu
24 per kilowatt hour (HHV)—

1 “(A) shall be based on the design annual
2 heat input to and the design annual net elec-
3 trical power, fuels and chemicals output from
4 such unit (determined without regard to such
5 unit’s co-generation of steam),

6 “(B) shall be adjusted for the heat content
7 of the design coal to be used by the unit if it
8 is less than 12,000 Btu per pound according to
9 the following formula:

$$10 \text{ Design net heat rate} = \text{Unit net heat rate} \times [1 -$$

$$11 \quad \{((12,000 - \text{design coal heat content, Btu per pound}) /$$

$$12 \quad 1,000) \times 0.013\}],$$

13 “(C) shall be corrected for the site ref-
14 erence conditions of—

15 “(i) elevation above sea level of 500
16 feet,

17 “(ii) air pressure of 14.4 pounds per
18 square inch absolute (psia),

19 “(iii) temperature, dry bulb of 63°F,

20 “(iv) temperature, wet bulb of 54°F,

21 and

22 “(v) relative humidity of 55 percent,

23 and

24 “(D) shall be adjusted (or credit given) for
25 any qualifying unit that installs carbon capture

1 controls that remove not less than 50 percent of
2 the unit's carbon dioxide emissions up to the
3 design heat rate level that would have resulted
4 without installation of carbon capture controls.

5 “(5) HHV.—The term ‘HHV’ means higher
6 heating value.

7 “(6) APPLICATION OF CERTAIN RULES.—The
8 rules of paragraphs (3), (4), and (5) of section 45(d)
9 shall apply.

10 “(7) INFLATION ADJUSTMENT FACTOR.—

11 “(A) IN GENERAL.— The term ‘inflation
12 adjustment factor’ means, with respect to a cal-
13 endar year, a fraction the numerator of which
14 is the GDP implicit price deflator for the pre-
15 ceding calendar year and the denominator of
16 which is the GDP implicit price deflator for the
17 calendar year 2003.

18 “(B) GDP IMPLICIT PRICE DEFLATOR.—
19 The term ‘GDP implicit price deflator’ means
20 the most recent revision of the implicit price
21 deflator for the gross domestic product as com-
22 puted by the Department of Commerce before
23 March 15 of the calendar year.

24 “(8) NONCOMPLIANCE WITH POLLUTION
25 LAWS.—For purposes of this section, a unit which is

1 not in compliance with the applicable State and Fed-
2 eral pollution prevention, control, and permit re-
3 quirements for any period of time shall not be con-
4 sidered to be a qualifying clean coal technology unit
5 during such period.

6 “(e) NATIONAL LIMITATION ON THE AGGREGATE CA-
7 PACITY OF QUALIFYING CLEAN COAL TECHNOLOGY
8 UNITS.—

9 “(1) IN GENERAL.—For purposes of subsection
10 (d)(1)(E), the national megawatt capacity limitation
11 for qualifying clean coal technology units is 4,000
12 megawatts.

13 “(2) ALLOCATION OF LIMITATION.—The Sec-
14 retary shall allocate the national megawatt capacity
15 limitation for qualifying clean coal technology units
16 in such manner as the Secretary may prescribe
17 under the regulations under paragraph (3) provided,
18 however, that such allocation shall not exceed
19 300,000 kilowatts per qualifying clean coal tech-
20 nology unit.

21 “(3) REGULATIONS.—Not later than 6 months
22 after the date of the enactment of this section, the
23 Secretary shall prescribe such regulations as may be
24 necessary or appropriate—

1 “(A) to carry out the purposes of this sub-
2 section,

3 “(B) to limit the capacity of any qualifying
4 clean coal technology unit to which this section
5 applies so that the combined megawatt capacity
6 allocated to all such units under this subsection
7 when all such units are placed in service during
8 the 10-year period described in subsection
9 (d)(1)(C), does not exceed 4,000 megawatts,

10 “(C) to provide a certification process
11 under which the Secretary, in consultation with
12 the Secretary of Energy, shall approve and allo-
13 cate the national megawatt capacity limita-
14 tion—

15 “(i) to encourage the units with the
16 highest thermal efficiencies, when adjusted
17 for the heat content of the design coal and
18 site reference conditions described in sub-
19 section (d)(4)(C), and superior environ-
20 mental performance compared to other
21 proposals, be placed in service as soon as
22 possible,

23 “(ii) to allocate capacity to taxpayers
24 that have a definite and credible plan for
25 placing into commercial operation a quali-

1 fying clean coal technology unit, includ-
2 ing—

3 “(I) a site,

4 “(II) contractual commitments
5 for procurement and construction or,
6 in the case of regulated utilities, the
7 agreement of the State utility commis-
8 sion,

9 “(III) filings for all necessary
10 preconstruction approvals,

11 “(IV) a demonstrated record of
12 having successfully completed com-
13 parable projects on a timely basis, and

14 “(V) such other factors that the
15 Secretary determines are appropriate,

16 “(D) to allocate the national megawatt ca-
17 pacity limitation to a portion of the capacity of
18 a qualifying clean coal technology unit if the
19 Secretary determines that such an allocation
20 would maximize the amount of efficient produc-
21 tion encouraged with the available tax credits,

22 “(E) to set progress requirements and con-
23 ditional approvals so that capacity allocations
24 for clean coal technology units that become un-
25 likely to meet the necessary conditions for

1 qualifying can be reallocated by the Secretary
2 to other clean coal technology units, and

3 “(F) to provide taxpayers with opportuni-
4 ties to correct administrative errors and omis-
5 sions with respect to allocations and record
6 keeping within a reasonable period after dis-
7 covery, taking into account the availability of
8 regulations and other administrative guidance
9 from the Secretary.”.

10 (b) CREDIT TREATED AS BUSINESS CREDIT.—Sec-
11 tion 38(b) of the Internal Revenue Code of 1986, as
12 amended by this Act, is amended by striking “plus” at
13 the end of paragraph (18), by striking the period at the
14 end of paragraph (19) and inserting “, plus”, and by add-
15 ing at the end the following new paragraph:

16 “(20) the qualifying clean coal technology pro-
17 duction credit determined under section 45I(a).”.

18 (c) TRANSITIONAL RULE.—Section 39(d) of the In-
19 ternal Revenue Code of 1986 (relating to transitional
20 rules), as amended by this Act, is amended by adding at
21 the end the following new paragraph:

22 “(16) NO CARRYBACK OF SECTION 45I CREDIT
23 BEFORE EFFECTIVE DATE.—No portion of the un-
24 used business credit for any taxable year which is
25 attributable to the qualifying clean coal technology

1 production credit determined under section 45I may
 2 be carried back to a taxable year ending on or before
 3 the date of the enactment of section 45I.”.

4 (d) CLERICAL AMENDMENT.—The table of sections
 5 for subpart D of part IV of subchapter A of chapter 1
 6 of the Internal Revenue Code of 1986, as amended by this
 7 Act, is amended by adding at the end the following new
 8 item:

“Sec. 45I. Credit for production from a qualifying clean coal technology unit.”.

9 (e) EFFECTIVE DATE.—The amendments made by
 10 this section shall apply to production after the date of the
 11 enactment of this act, in taxable years ending after such
 12 date.

13 **Subtitle B—Incentives for Early**
 14 **Commercial Applications of Ad-**
 15 **vanced Clean Coal Technologies**

16 **SEC. 302. CREDIT FOR INVESTMENT IN QUALIFYING AD-**
 17 **VANCED CLEAN COAL TECHNOLOGY.**

18 (a) ALLOWANCE OF QUALIFYING ADVANCED CLEAN
 19 COAL TECHNOLOGY UNIT CREDIT.—Section 46 of the In-
 20 ternal Revenue Code of 1986 (relating to amount of cred-
 21 it) is amended by striking “and” at the end of paragraph
 22 (2), by striking the period at the end of paragraph (3)
 23 and inserting “, and”, and by adding at the end the fol-
 24 lowing new paragraph:

1 “(4) the qualifying advanced clean coal tech-
2 nology unit credit.”.

3 (b) AMOUNT OF QUALIFYING ADVANCED CLEAN
4 COAL TECHNOLOGY UNIT CREDIT.—Subpart E of part
5 IV of subchapter A of chapter 1 of the Internal Revenue
6 Code of 1986 (relating to rules for computing investment
7 credit) is amended by inserting after section 48 the fol-
8 lowing new section:

9 **“SEC. 48A. QUALIFYING ADVANCED CLEAN COAL TECH-
10 NOLOGY UNIT CREDIT.**

11 “(a) IN GENERAL.—For purposes of section 46, the
12 qualifying advanced clean coal technology unit credit for
13 any taxable year is an amount equal to 10 percent of the
14 applicable percentage of the qualified investment in a
15 qualifying advanced clean coal technology unit for such
16 taxable year.

17 “(b) QUALIFYING ADVANCED CLEAN COAL TECH-
18 NOLOGY UNIT.—

19 “(1) IN GENERAL.—For purposes of subsection
20 (a), the term “qualifying advanced clean coal tech-
21 nology unit” means an advanced clean coal tech-
22 nology unit of the taxpayer—

23 “(A)(i)(I) in the case of a unit first placed
24 in service after the date of the enactment of

1 this section, the original use of which com-
2 mences with the taxpayer, or

3 “(II) in the case of the retrofitting or
4 repowering of a unit first placed in service be-
5 fore such date of enactment, the retrofitting or
6 repowering of which is completed by the tax-
7 payer after such date, or

8 “(ii) which is acquired through purchase
9 (as defined by section 179(d)(2)),

10 “(B) which is depreciable under section
11 167,

12 “(C) which has a useful life of not less
13 than 4 years,

14 “(D) which is located in the United States,

15 “(E) which is not receiving nor is sched-
16 uled to receive funding under the Clean Coal
17 Technology Program, the Power Plant Improve-
18 ment Initiative, or the Clean Coal Power Initia-
19 tive administered by the Secretary of Energy,

20 “(F) which is not a qualifying clean coal
21 technology unit, and

22 “(G) which receives an allocation of a por-
23 tion of the national megawatt capacity limita-
24 tion under subsection (f).

1 “(2) SPECIAL RULE FOR SALE-LEASEBACKS.—
2 For purposes of subparagraph (A) of paragraph (1),
3 in the case of a unit which—

4 “(A) is originally placed in service by a
5 person, and

6 “(B) is sold and leased back by such per-
7 son, or is leased to such person, within 3
8 months after the date such unit was originally
9 placed in service, for a period of not less than
10 12 years, such unit shall be treated as originally
11 placed in service not earlier than the date on
12 which such unit is used under the leaseback (or
13 lease) referred to in subparagraph (B). The
14 preceding sentence shall not apply to any prop-
15 erty if the lessee and lessor of such property
16 make an election under this sentence. Such an
17 election, once made, may be revoked only with
18 the consent of the Secretary.

19 “(3) NONCOMPLIANCE WITH POLLUTION
20 LAWS.—For purposes of this subsection, a unit
21 which is not in compliance with the applicable State
22 and Federal pollution prevention, control, and per-
23 mit requirements for any period of time shall not be
24 considered to be a qualifying advanced clean coal
25 technology unit during such period.

1 “(c) APPLICABLE PERCENTAGE.—For purposes of
2 this section, with respect to any qualifying advanced clean
3 coal technology unit, the applicable percentage is the per-
4 centage equal to the ratio which the portion of the national
5 megawatt capacity limitation allocated to the taxpayer
6 with respect to such unit under subsection (f) bears to
7 the total megawatt capacity of such unit.

8 “(d) ADVANCED CLEAN COAL TECHNOLOGY UNIT.—
9 For purposes of this section—

10 “(1) IN GENERAL.—The term ‘advanced clean
11 coal technology unit’ means a new, retrofit, or
12 repowering unit of the taxpayer which—

13 “(A) is—

14 “(i) an eligible advanced pulverized
15 coal or atmospheric fluidized bed combus-
16 tion technology unit,

17 “(ii) an eligible pressurized fluidized
18 bed combustion technology unit,

19 “(iii) an eligible integrated gasifi-
20 cation combined cycle technology unit, or

21 “(iv) an eligible other technology unit,

22 and

23 “(B) meets the carbon emission rate re-
24 quirements of paragraph (6).

1 “(2) ELIGIBLE ADVANCED PULVERIZED COAL
2 OR ATMOSPHERIC FLUIDIZED BED COMBUSTION
3 TECHNOLOGY UNIT.—The term ‘eligible advanced
4 pulverized coal or atmospheric fluidized bed combus-
5 tion technology unit’ means a clean coal technology
6 unit using advanced pulverized coal or atmospheric
7 fluidized bed combustion technology which—

8 “(A) is placed in service after the date of
9 the enactment of this section and before Janu-
10 ary 1, 2015, and

11 “(B) has a design net heat of not more
12 than 8,500 (8,900 in the case of units placed
13 in service before 2011).

14 “(3) ELIGIBLE PRESSURIZED FLUIDIZED BED
15 COMBUSTION TECHNOLOGY UNIT.—The term ‘eligi-
16 ble pressurized fluidized bed combustion technology
17 unit’ means a clean coal technology unit using pres-
18 surized fluidized bed combustion technology which—

19 “(A) is placed in service after the date of
20 the enactment of this section and before Janu-
21 ary 1, 2019, and

22 “(B) has a design net heat of not more
23 than 7,720 (8,900 in the case of units placed
24 in service before 2011, and 8,500 in the case of

1 units placed in service after 2010 and before
2 2015).

3 “(4) ELIGIBLE INTEGRATED GASIFICATION
4 COMBINED CYCLE TECHNOLOGY UNIT.—The term
5 ‘eligible integrated gasification combined cycle tech-
6 nology unit’ means a clean coal technology unit
7 using integrated gasification combined cycle tech-
8 nology, with or without fuel or chemical co-produc-
9 tion, which—

10 “(A) is placed in service after the date of
11 the enactment of this section and before Janu-
12 ary 1, 2019,

13 “(B) has a design net heat rate of not
14 more than 7,720 (8,900 in the case of units
15 placed in service before 2011, and 8,500 in the
16 case of units placed in service after 2010 and
17 before 2015), and

18 “(C) has a net thermal efficiency (HHV)
19 using coal with fuel or chemical co-production
20 of not less than 44.2 percent (38.4 percent in
21 the case of units placed in service before 2011,
22 and 40.2 percent in the case of units placed in
23 service after 2010 and before 2015).

24 “(5) ELIGIBLE OTHER TECHNOLOGY UNIT.—
25 The term ‘eligible other technology unit’ means a

1 clean coal technology unit using any other tech-
2 nology for the production of electricity which is
3 placed in service after the date of the enactment of
4 this section and before January 1, 2019.

5 “(6) CARBON EMISSION RATE REQUIRE-
6 MENTS.—

7 “A) IN GENERAL.—Except as provided in
8 subparagraph (B), a unit meets the require-
9 ments of this paragraph if—

10 “(i) in the case of a unit design coal
11 with a heat content of not more than
12 9,000 Btu per pound, the carbon emission
13 rate is less than 0.60 pound of carbon per
14 kilowatt hour, and

15 “(ii) in the case of a unit design coal
16 with a heat content of more than 9,000
17 Btu per pound, the carbon emission rate is
18 less than 0.54 pound of carbon per kilo-
19 watt hour.

20 “(B) ELIGIBLE OTHER TECHNOLOGY
21 UNIT.—In the case of an eligible other tech-
22 nology unit, subparagraph (A) shall be applied
23 by substituting ‘0.51’ and ‘0.459’ for ‘0.60’ and
24 ‘0.54’, respectively.

1 “(e) GENERAL DEFINITIONS.—Any term used in this
2 section which is also used in section 45I shall have the
3 meaning given such term in section 45I.

4 “(f) NATIONAL LIMITATION ON THE AGGREGATE CA-
5 PACITY OF ADVANCED CLEAN COAL TECHNOLOGY
6 UNITS.—

7 “(1) IN GENERAL.—For purposes of subsection
8 (b)(1)(G), the national megawatt capacity limitation
9 is—

10 “(A) for qualifying advanced clean coal
11 technology units using advanced pulverized coal
12 or atmospheric fluidized bed combustion tech-
13 nology, not more than 1,000 megawatts (not
14 more than 500 megawatts in the case of units
15 placed in service before 2011),

16 “(B) for such units using pressurized flu-
17 idized bed combustion technology, not more
18 than 500 megawatts (not more than 250
19 megawatts in the case of units placed in service
20 before 2011),

21 “(C) for such units using integrated gasifi-
22 cation combined cycle technology, with or with-
23 out fuel or chemical co-production, not more
24 than 2,000 megawatts (not more than 750
25 megawatts, or not more than one project with

1 a design net heat rate greater than 8900 Btu
2 per kilowatt hour, whichever is less, in the case
3 of units placed in service before 2011), and

4 “(D) for such units using other technology
5 for the production of electricity, not more than
6 500 megawatts (not more than 250 megawatts
7 in the case of units placed in service before
8 2011).

9 “(2) ALLOCATION OF LIMITATION.—The Sec-
10 retary shall allocate the national megawatt capacity
11 limitation for qualifying advanced clean coal tech-
12 nology units in such manner as the Secretary may
13 prescribe under the regulations under paragraph (3).

14 “(3) REGULATIONS.—Not later than 6 months
15 after the date of the enactment of this section, the
16 Secretary shall prescribe such regulations as may be
17 necessary or appropriate—

18 “(A) to carry out the purposes of this sub-
19 section and section 45J,

20 “(B) to limit the capacity of any qualifying
21 advanced clean coal technology unit to which
22 this section applies so that the combined mega-
23 watt capacity of all such units to which this sec-
24 tion applies does not exceed 4,000 megawatts,

1 “(C) to provide a certification process de-
2 scribed in section 45I(e)(3)(C)(i)–(ii),

3 “(D) to carry out the purposes described
4 in subparagraphs (D), (E), and (F) of section
5 45I(e)(3), and

6 “(E) to reallocate capacity which is not al-
7 located to any technology described in subpara-
8 graphs (A) through (D) of paragraph (1) be-
9 cause an insufficient number of qualifying units
10 request an allocation for such technology, to an-
11 other technology described in such subpara-
12 graphs in order to maximize the amount of en-
13 ergy efficient production encouraged with the
14 available tax credits.

15 “(4) SELECTION CRITERIA.—For purposes of
16 paragraph (3)(C), the selection criteria for allocating
17 the national megawatt capacity limitation to quali-
18 fying advanced clean coal technology units—

19 “(A) shall be established by the Secretary
20 of Energy as part of a competitive solicitation,

21 “(B) shall include primary criteria of min-
22 imum design net heat rate, maximum design
23 thermal efficiency, environmental performance,
24 and lowest cost to the Government,

1 “(C) shall include criteria for the selection
2 of a unit(s) that achieves a thermal efficiency of
3 lower than 8,900 Btu per kilowatt hour in that
4 instance where two or more projects are other-
5 wise eligible for the credit provided by this sec-
6 tion, and have applied to the Secretary for se-
7 lection at or near the same period in time, and

8 “(D) shall include supplemental criteria as
9 determined appropriate by the Secretary of En-
10 ergy.

11 “(g) QUALIFIED INVESTMENT.—For purposes of
12 subsection (a), the term ‘qualified investment’ means, with
13 respect to any taxable year, the basis of a qualifying ad-
14 vanced clean coal technology unit placed in service by the
15 taxpayer during such taxable year (in the case of a unit
16 described in subsection (b)(1)(A)(i)(II), only that portion
17 of the basis of such unit which is properly attributable
18 to the retrofitting or repowering of such unit).

19 “(h) QUALIFIED PROGRESS EXPENDITURES.—

20 “(1) INCREASE IN QUALIFIED INVESTMENT.—

21 In the case of a taxpayer who has made an election
22 under paragraph (5), the amount of the qualified in-
23 vestment of such taxpayer for the taxable year (de-
24 termined under subsection (g) without regard to this
25 subsection) shall be increased by an amount equal to

1 the aggregate of each qualified progress expenditure
2 for the taxable year with respect to progress expend-
3 iture property.

4 “(2) PROGRESS EXPENDITURE PROPERTY DE-
5 FINED.—For purposes of this subsection, the term
6 ‘progress expenditure property’ means any property
7 being constructed by or for the taxpayer and which
8 it is reasonable to believe will qualify as a qualifying
9 advanced clean coal technology unit which is being
10 constructed by or for the taxpayer when it is placed
11 in service.

12 “(3) QUALIFIED PROGRESS EXPENDITURES DE-
13 FINED.—For purposes of this subsection—

14 “(A) SELF-CONSTRUCTED PROPERTY.—In
15 the case of any self-constructed property, the
16 term ‘qualified progress expenditures’ means
17 the amount which, for purposes of this subpart,
18 is properly chargeable (during such taxable
19 year) to capital account with respect to such
20 property.

21 “(B) NONSELF-CONSTRUCTED PROP-
22 ERTY.—In the case of nonself-constructed prop-
23 erty, the term ‘qualified progress expenditures’
24 means the amount paid during the taxable year

1 to another person for the construction of such
2 property.

3 “(4) OTHER DEFINITIONS.—For purposes of
4 this subsection—

5 “(A) SELF-CONSTRUCTED PROPERTY.—
6 The term ‘self-constructed property’ means
7 property for which it is reasonable to believe
8 that more than half of the construction expendi-
9 tures will be made directly by the taxpayer.

10 “(B) NONSELF-CONSTRUCTED PROP-
11 erty.—The term ‘nonself-constructed property’
12 means property which is not self-constructed
13 property.

14 “(C) CONSTRUCTION, ETC.—The term
15 ‘construction’ includes reconstruction and erec-
16 tion, and the term ‘constructed’ includes recon-
17 structed and erected.

18 “(D) ONLY CONSTRUCTION OF QUALI-
19 FYING ADVANCED CLEAN COAL TECHNOLOGY
20 UNIT TO BE TAKEN INTO ACCOUNT.—Construc-
21 tion shall be taken into account only if, for pur-
22 poses of this subpart, expenditures therefor are
23 properly chargeable to capital account with re-
24 spect to the property.

1 “(5) ELECTION.—An election under this sub-
2 section may be made at such time and in such man-
3 ner as the Secretary may by regulations prescribe.
4 Such an election shall apply to the taxable year for
5 which made and to all subsequent taxable years.
6 Such an election, once made, may not be revoked ex-
7 cept with the consent of the Secretary.

8 “(i) COORDINATION WITH OTHER CREDITS.—This
9 section shall not apply to any property with respect to
10 which the rehabilitation credit under section 47 or the en-
11 ergy credit under section 48 is allowed unless the taxpayer
12 elects to waive the application of such credit to such prop-
13 erty.”.

14 (c) RECAPTURE.—Section 50(a) of the Internal Rev-
15 enue Code of 1986 (relating to other special rules) is
16 amended by adding at the end the following new para-
17 graph:

18 “(6) SPECIAL RULES RELATING TO QUALIFYING
19 ADVANCED CLEAN COAL TECHNOLOGY UNIT.—For
20 purposes of applying this subsection in the case of
21 any credit allowable by reason of section 48A, the
22 following shall apply:

23 “(A) GENERAL RULE.—In lieu of the
24 amount of the increase in tax under paragraph
25 (1), the increase in tax shall be an amount

1 equal to the investment tax credit allowed under
2 section 38 for all prior taxable years with re-
3 spect to a qualifying advanced clean coal tech-
4 nology unit (as defined by section 48A(b)(1))
5 multiplied by a fraction whose numerator is the
6 number of years remaining to fully depreciate
7 under this title the qualifying advanced clean
8 coal technology unit disposed of, and whose de-
9 nominator is the total number of years over
10 which such unit would otherwise have been sub-
11 ject to depreciation. For purposes of the pre-
12 ceding sentence, the year of disposition of the
13 qualifying advanced clean coal technology unit
14 shall be treated as a year of remaining depre-
15 ciation.

16 “(B) PROPERTY CEASES TO QUALIFY FOR
17 PROGRESS EXPENDITURES.—Rules similar to
18 the rules of paragraph (2) shall apply in the
19 case of qualified progress expenditures for a
20 qualifying advanced clean coal technology unit
21 under section 48A, except that the amount of
22 the increase in tax under subparagraph (A) of
23 this paragraph shall be substituted for the
24 amount described in such paragraph (2).

1 “(C) APPLICATION OF PARAGRAPH.—This
2 paragraph shall be applied separately with re-
3 spect to the credit allowed under section 38 re-
4 garding a qualifying advanced clean coal tech-
5 nology unit.”.

6 (d) TRANSITIONAL RULE.—Section 39(d) of the In-
7 ternal Revenue Code of 1986 (relating to transitional
8 rules), as amended by this Act, is amended by adding at
9 the end the following new paragraph:

10 “(17) NO CARRYBACK OF SECTION 48A CREDIT
11 BEFORE EFFECTIVE DATE.—No portion of the un-
12 used business credit for any taxable year which is
13 attributable to the qualifying advanced clean coal
14 technology unit credit determined under section 48A
15 may be carried back to a taxable year ending on or
16 before the date of the enactment of section 48A.”.

17 (e) TECHNICAL AMENDMENTS.—

18 (1) Section 49(a)(1)(C) of the Internal Revenue
19 Code of 1986 is amended by striking “and” at the
20 end of clause (ii), by striking the period at the end
21 of clause (iii) and inserting “, and”, and by adding
22 at the end the following new clause:

23 “(iv) the portion of the basis of any
24 qualifying advanced clean coal technology

1 unit attributable to any qualified invest-
2 ment (as defined by section 48A(g)).”.

3 (2) Section 50(a)(4) of the Internal Revenue
4 Code of 1986 is amended by striking “and (2)” and
5 inserting “(2), and (6)”.

6 (3) Section 50(c) of the Internal Revenue Code
7 of 1986 is amended by adding at the end the fol-
8 lowing new paragraph:

9 “(6) NONAPPLICATION.—Paragraphs (1) and
10 (2) shall not apply to any qualifying advanced clean
11 coal technology unit credit under section 48A.”.

12 (4) The table of sections for subpart E of part
13 IV of subchapter A of chapter 1 of the Internal Rev-
14 enue Code of 1986 is amended by inserting after the
15 item relating to section 48 the following new item:

“Sec. 48A. Qualifying advanced clean coal technology unit credit.”.

16 (f) EFFECTIVE DATE.—The amendments made by
17 this section shall apply to periods after the date of the
18 enactment of this Act, under rules similar to the rules of
19 section 48(m) of the Internal Revenue Code of 1986 (as
20 in effect on the day before the date of the enactment of
21 the Revenue Reconciliation Act of 1990).

22 **SEC. 2212. CREDIT FOR PRODUCTION FROM A QUALIFYING**
23 **ADVANCED CLEAN COAL TECHNOLOGY UNIT.**

24 (a) IN GENERAL.—Subpart D of part IV of sub-
25 chapter A of chapter 1 of the Internal Revenue Code of

1 1986 (relating to business related credits), as amended by
2 this Act, is amended by adding at the end the following
3 new section:

4 **“SEC. 45J. CREDIT FOR PRODUCTION FROM A QUALIFYING**
5 **ADVANCED CLEAN COAL TECHNOLOGY UNIT.**

6 “(a) GENERAL RULE.—For purposes of section 38,
7 the qualifying advanced clean coal technology production
8 credit of any taxpayer for any taxable year is equal to—

9 “(1) the applicable amount of advanced clean
10 coal technology production credit, multiplied by

11 “(2) the applicable percentage (as determined
12 under section 48A(c)) of the sum of—

13 “(A) the kilowatt hours of electricity, plus

14 “(B) each 3,413 Btu of fuels or chemicals,

15 produced by the taxpayer during such taxable year at a
16 qualifying advanced clean coal technology unit during the
17 10-year period beginning on the date the unit was origi-
18 nally placed in service (or returned to service after becom-
19 ing a qualifying advanced clean coal technology unit).

20 “(b) APPLICABLE AMOUNT.—For purposes of this
21 section, the applicable amount of advanced clean coal tech-
22 nology production credit with respect to production from
23 a qualifying advanced clean coal technology unit shall be
24 determined as follows:

1 “(1) Where the qualifying advanced clean coal
2 technology unit is producing electricity only:

3 “(A) In the case of a unit originally placed
4 in service before 2011, if—

“The design net heat rate is:	The applicable amount is:	
	For 1st 5 years of such service	For 2d 5 years of such service
Not more than 8,500	\$.0060	\$.0038
More than 8,500 but not more than 8,750	\$.0025	\$.0010
More than 8,750 but less than 8,900	\$.0010	\$.0010.

5 “(B) In the case of a unit originally placed
6 in service after 2010 and before 2015, if—

“The design net heat rate is:	The applicable amount is:	
	For 1st 5 years of such service	For 2d 5 years of such service
Not more than 7,770	\$.0105	\$.0090
More than 7,770 but not more than 8,125	\$.0085	\$.0068
More than 8,125 but less than 8,350	\$.0075	\$.0055.

7 “(C) In the case of a unit originally placed
8 in service after 2014 and before 2019, if—

“The design net heat rate is:	The applicable amount is:	
	For 1st 5 years of such service	For 2d 5 years of such service
Not more than 7,380	\$.0140	\$.0115
More than 7,380 but not more than 7,720	\$.0120	\$.0090.

9 “(2) Where the qualifying advanced clean coal
10 technology unit is producing fuel or chemicals:

1 “(A) In the case of a unit originally placed
 2 in service before 2011, if—

“The unit design net thermal efficiency (HHV) is:	The applicable amount is:	
	For 1st 5 years of such service	For 2d 5 years of such service
Not less than 40.6 percent	\$.0060	\$.0038
Less than 40.6 but not less than 40 percent	\$.0025	\$.0010
Less than 40 but not less than 38.4 percent	\$.0010	\$.0010.

3 “(B) In the case of a unit originally placed
 4 in service after 2010 and before 2015, if—

“The unit design net thermal efficiency (HHV) is:	The applicable amount is:	
	For the 1st 5 years of such service	For 2d 5 years of such service
Not less than 43.6 percent	\$.0105	\$.0090
Less than 43.6 but not less than 42 percent	\$.0085	\$.0068
Less than 42 but not less than 40.2 percent	\$.0075	\$.0055.

5 “(C) In the case of a unit originally placed
 6 in service after 2014 and before 2019, if—

“The unit design net thermal efficiency (HHV) is:	The applicable amount is:	
	For 1st 5 years of such service	For 2d 5 years of such service
Not less than 44.2 percent	\$.0140	\$.0115
Less than 44.2 but not less than 43.9 percent	\$.0120	\$.0090.

7 “(c) A qualifying clean coal technology facility origi-
 8 nally placed in service before 2009 that has a design heat
 9 rate that meets a lower heat rate test in paragraphs
 10 (1)(A)(B) and (C) and (2) (A)(B) and (C) above or a
 11 qualifying clean coal technology facility originally placed

1 in service before 2013 that has a design heat rate that
2 meets a lower heat rate test in paragraphs (1)(C), or
3 (2)(C) above shall receive the highest applicable amount
4 with respect to a production tax credit for which it quali-
5 fies.

6 “(d) INFLATION ADJUSTMENT.—For calendar years
7 after 2003, each amount in paragraphs (1) and (2) of sub-
8 section (b) shall be adjusted by multiplying such amount
9 by the inflation adjustment factor for the calendar year
10 in which the amount is applied. If any amount as in-
11 creased under the preceding sentence is not a multiple of
12 0.01 cent, such amount shall be rounded to the nearest
13 multiple of 0.01 cent.

14 “(e) DEFINITIONS AND SPECIAL RULES.—For pur-
15 poses of this section—

16 “(1) IN GENERAL.—Any term used in this sec-
17 tion which is also used in section 451 or 48A of the
18 Internal Revenue Code of 1986 shall have the mean-
19 ing given such term in such section.

20 “(2) APPLICABLE RULES.—The rules of para-
21 graphs (3), (4), and (5) of section 45(d) of the In-
22 ternal Revenue Code of 1986 shall apply.”.

23 (b) CREDIT TREATED AS BUSINESS CREDIT.—Sec-
24 tion 38(b) of the Internal Revenue Code of 1986, as
25 amended by this Act, is amended by striking “plus” at

1 the end of paragraph (19), by striking the period at the
2 end of paragraph (20) and inserting “, plus”, and by add-
3 ing at the end the following new paragraph:

4 “(21) the qualifying advanced clean coal tech-
5 nology production credit determined under section
6 45J(a).”.

7 (c) TRANSITIONAL RULE.—Section 39(d) of the In-
8 ternal Revenue Code of 1986 (relating to transitional
9 rules), as amended by this Act, is amended by adding at
10 the end the following new paragraph:

11 “(18) NO CARRYBACK OF SECTION 45J CREDIT
12 BEFORE EFFECTIVE DATE.—No portion of the un-
13 used business credit for any taxable year which is
14 attributable to the qualifying advanced clean coal
15 technology production credit determined under sec-
16 tion 45J may be carried back to a taxable year end-
17 ing on or before the date of the enactment of section
18 45J.”.

19 (d) DENIAL OF DOUBLE BENEFIT.—Section 29(d) of
20 the Internal Revenue Code of 1986 (relating to other defi-
21 nitions and special rules) is amended by adding at the end
22 the following paragraph:

23 “(9) DENIAL OF DOUBLE BENEFIT.—This sec-
24 tion shall not apply with respect to any qualified fuel
25 the production of which may be taken into account

1 for purposes of determining the credit under section
2 45J.”.

3 (e) CLERICAL AMENDMENT.—The table of sections
4 for subpart D of part IV of subchapter A of chapter 1
5 of the Internal Revenue Code of 1986, as amended by this
6 Act, is amended by adding at the end the following new
7 item:

“Sec. 45J. Credit for production from a qualifying advanced clean coal technology unit.”.

8 (f) EFFECTIVE DATE.—The amendments made by
9 this section shall apply to production after the date of the
10 enactment of this Act, in taxable years ending after such
11 date.

12 **Subtitle C—Treatment of Persons** 13 **Not Able To Use Entire Credit**

14 **SEC. 2221. TREATMENT OF PERSONS NOT ABLE TO USE EN-** 15 **TIRE CREDIT.**

16 (a) IN GENERAL.—Section 45I of the Internal Rev-
17 enue Code of 1986, as added by this Act, is amended by
18 adding at the end the following new subsection:

19 “(f) TREATMENT OF PERSONS NOT ABLE TO USE
20 ENTIRE CREDIT.—

21 “(1) ALLOWANCE OF CREDITS.—

22 “(A) IN GENERAL.—Any credit allowable
23 under this section, section 45J, or section 48A
24 with respect to a facility owned by a person de-

1 scribed in subparagraph (B) may be transferred
2 or used as provided in this subsection, and the
3 determination as to whether the credit is allow-
4 able shall be made without regard to the tax-
5 exempt status of the person.

6 “(B) PERSONS DESCRIBED.—A person is
7 described in this subparagraph if the person
8 is—

9 “(i) an organization described in sec-
10 tion 501(c)(12)(C) and exempt from tax
11 under section 501(a),

12 “(ii) an organization described in sec-
13 tion 1381(a)(2)(C),

14 “(iii) a public utility (as defined in
15 section 136(c)(2)(B)),

16 “(iv) any State or political subdivision
17 thereof, the District of Columbia, or any
18 agency or instrumentality of any of the
19 foregoing,

20 “(v) any Indian tribal government
21 (within the meaning of section 7871) or
22 any agency or instrumentality thereof, or

23 “(vi) the Tennessee Valley Authority.

24 “(2) TRANSFER OF CREDIT.—

1 “(A) IN GENERAL.—A person described in
2 clause (i), (ii), (iii), (iv), or (v) of paragraph
3 (1)(B) may transfer any credit to which para-
4 graph (1)(A) applies through an assignment to
5 any other person not described in paragraph
6 (1)(B). Such transfer may be revoked only with
7 the consent of the Secretary.

8 “(B) REGULATIONS.—The Secretary shall
9 prescribe such regulations as necessary to in-
10 sure that any credit described in subparagraph
11 (A) is claimed once and not reassigned by such
12 other person.

13 “(C) TRANSFER PROCEEDS TREATED AS
14 ARISING FROM ESSENTIAL GOVERNMENT FUNC-
15 TION.—Any proceeds derived by a person de-
16 scribed in clause (iii), (iv), or (v) of paragraph
17 (1)(B) from the transfer of any credit under
18 subparagraph (A) shall be treated as arising
19 from the exercise of an essential government
20 function.

21 “(3) USE BY TVA.—

22 “(A) IN GENERAL.—Notwithstanding any
23 other provision of law, in the case of a person
24 described in paragraph (1)(B)(vi), any credit to
25 which paragraph (1)(A) applies may be applied

1 as a credit against the payments required to be
2 made in any fiscal year under section 15d(e) of
3 the Tennessee Valley Authority Act of 1933 (16
4 U.S.C. 831n-4(e)) as an annual return on the
5 appropriations investment and an annual repay-
6 ment sum.

7 “(B) TREATMENT OF CREDITS.—The ag-
8 gregate amount of credits described in para-
9 graph (1)(A) with respect to such person shall
10 be treated in the same manner and to the same
11 extent as if such credits were a payment in cash
12 and shall be applied first against the annual re-
13 turn on the appropriations investment.

14 “(C) CREDIT CARRYOVER.—With respect
15 to any fiscal year, if the aggregate amount of
16 credits described in paragraph (1)(A) with re-
17 spect to such person exceeds the aggregate
18 amount of payment obligations described in
19 subparagraph (A), the excess amount shall re-
20 main available for application as credits against
21 the amounts of such payment obligations in
22 succeeding fiscal years in the same manner as
23 described in this paragraph.

24 “(5) CREDIT NOT INCOME.—Any transfer
25 under paragraph (2) or use under paragraph (3) of

1 any credit to which paragraph (1)(A) applies shall
2 not be treated as income for purposes of section
3 501(c)(12).

4 “(6) TREATMENT OF UNRELATED PERSONS.—
5 For purposes of this subsection, sales among and be-
6 tween persons described in clauses (i), (ii), (iii), and
7 (v) of paragraph (1)(A) shall be treated as sales be-
8 tween unrelated parties.”.

9 (b) EFFECTIVE DATE.—The amendment made by
10 this section shall apply to production after the date of the
11 enactment of this Act, in taxable years ending after such
12 date.

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