

108TH CONGRESS
1ST SESSION

H. R. 1269

To provide for research, development, and demonstration on coal and related technologies, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 13, 2003

Mr. COSTELLO (for himself, Mr. BOUCHER, Mr. WHITFIELD, Mr. SHIMKUS, Mr. LIPINSKI, and Mr. MOLLOHAN) introduced the following bill; which was referred to the Committee on Science

A BILL

To provide for research, development, and demonstration on coal and related technologies, and for other purposes.

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 This Act may be cited as the “Coal Energy Research,
5 Development, and Demonstration Act of 2003”.

6 **SEC. 2. DEFINITIONS.**

7 For purposes of this Act:

8 (1) COST AND PERFORMANCE GOALS.—The
9 term “cost and performance goals” means the cost

1 and performance goals established under section
2 101(a).

3 (2) SECRETARY.—The term “Secretary” means
4 the Secretary of Energy.

5 **TITLE I—COAL RESEARCH AND**
6 **DEVELOPMENT**

7 **SEC. 101. COAL AND RELATED TECHNOLOGIES PROGRAMS.**

8 (a) ESTABLISHMENT OF COST AND PERFORMANCE
9 GOALS.—

10 (1) IN GENERAL.—The Secretary shall perform
11 an assessment that identifies cost and performance
12 goals, for achievement in 2007, 2015, and the years
13 after 2020, for technologies that would permit the
14 continued cost-competitive use of coal for electricity
15 generation, as chemical feedstocks, and as transpor-
16 tation fuel.

17 (2) CONSULTATION.—In establishing the cost
18 and performance goals under this subsection, the
19 Secretary shall—

20 (A) consider activities and studies under-
21 taken by industry in cooperation with the De-
22 partment of Energy in support of the assess-
23 ment performed under paragraph (1); and

24 (B) consult with interested entities, includ-
25 ing coal producers, industries using coal, orga-

1 nizations to promote coal and advanced coal
2 technologies, environmental organizations, and
3 organizations representing workers.

4 (3) TIMING.—The Secretary shall—

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

9 (B) not later than 180 days after the date
10 of enactment of this Act, after taking into con-
11 sideration any public comments received, trans-
12 mit to Congress the final cost and performance
13 goals.

14 (b) STUDY.—

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

21 (A) identify technologies that, by them-
22 selves or in combination with other tech-
23 nologies, may be capable of achieving the cost
24 and performance goals;

1 (B) assess the costs that would be incurred
2 by, and the period of time that would be re-
3 quired for, the development and demonstration
4 of technologies that, by themselves or in com-
5 bination with other technologies, contribute to
6 the achievement of the cost and performance
7 goals;

8 (C) develop recommendations for tech-
9 nology development programs, which the De-
10 partment of Energy could carry out in coopera-
11 tion with industry, to develop and demonstrate
12 technologies that, by themselves or in combina-
13 tion with other technologies, achieve the cost
14 and performance goals; and

15 (D) develop recommendations for addi-
16 tional authorities required to achieve the cost
17 and performance goals and review and rec-
18 ommend changes, if any, to those cost and per-
19 formance goals if the Secretary determines that
20 such changes are necessary as a result of ongo-
21 ing research, development, and demonstration
22 of technologies.

23 (2) EXPERT ADVICE.—In carrying out this sub-
24 section, the Secretary shall give due weight to the

1 expert advice of representatives of the entities de-
2 scribed in subsection (a)(2)(B).

3 **SEC. 102. PRODUCTION AND GENERATION OF COAL-BASED**
4 **POWER.**

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

9 (1) this title;

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

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

15 (4) title XVI of the Energy Policy Act of 1992
16 (42 U.S.C. 13381 et seq.).

17 (b) CONDITIONS.—The program described in sub-
18 section (a) shall be designed to achieve the cost and per-
19 formance goals.

20 **SEC. 103. AUTHORIZATION OF APPROPRIATIONS.**

21 (a) IN GENERAL.—There are authorized to be appro-
22 priated to the Secretary \$200,000,000 for fiscal year
23 2005, \$210,000,000 for fiscal year 2006, and
24 \$220,500,000 for fiscal year 2007, to remain available

1 until expended, for carrying out the program under section
2 102, which may include—

- 3 (1) innovations for existing plants;
- 4 (2) integrated gasification combined cycle;
- 5 (3) advanced combustion systems;
- 6 (4) turbines for synthesis gas derived from coal;
- 7 (5) carbon capture and sequestration research
8 and development;
- 9 (6) coal-derived transportation fuels and chemi-
10 cals;
- 11 (7) solid fuels and feedstocks;
- 12 (8) advanced coal-related research; and
- 13 (9) advanced separation technologies.

14 (b) LIMIT ON USE OF FUNDS.—The Secretary shall
15 not use funds appropriated under this section until 30
16 days after the Secretary has transmitted to the Congress
17 a report describing the proposed use of such funds and
18 containing a plan that includes—

- 19 (1) a detailed description of how proposals, if
20 any, will be solicited and evaluated, including a list
21 of all activities expected to be undertaken;
- 22 (2) a detailed list of technical milestones for
23 each coal and related technology that will be pur-
24 sued; and

1 (3) a description of how the programs for which
2 such funds are authorized will be carried out so as
3 to complement and not duplicate activities author-
4 ized under the Clean Coal Power Initiative author-
5 ized under title II.

6 **TITLE II—CLEAN COAL POWER**
7 **INITIATIVE**

8 **SEC. 201. PROJECT CRITERIA.**

9 (a) IN GENERAL.—The Secretary shall provide fund-
10 ing under this title for coal energy generation projects that
11 advance efficiency, environmental performance, and cost
12 competitiveness well beyond the level of technologies that
13 on a full scale are in operation or have been demonstrated
14 as of the date of enactment of this Act.

15 (b) TECHNICAL CRITERIA FOR CLEAN COAL POWER
16 INITIATIVE.—

17 (1) GASIFICATION.—

18 (A) TECHNOLOGIES.—In allocating the
19 funds made available under section 204(a), the
20 Secretary shall ensure that up to 80 percent of
21 the funds are used for coal-based gasification
22 technologies, including gasification combined
23 cycle, gasification fuel cells, gasification co-
24 production, and hybrid gasification/combustion
25 projects.

1 (B) TECHNICAL MILESTONES.—The Sec-
2 retary shall set technical milestones specifying
3 emissions levels for projects funded under this
4 paragraph. The milestones shall be designed to
5 increasingly restrict emissions levels through
6 the life of the program. The milestones shall be
7 designed to achieve by 2020 coal gasification
8 projects able—

9 (i) to remove 99 percent of sulfur di-
10 oxide;

11 (ii) to emit no more than .05 lb of
12 NO_x per million BTU;

13 (iii) to achieve substantial reductions
14 in mercury emissions; and

15 (iv) to achieve a thermal efficiency
16 of—

17 (I) 60 percent for coal of more
18 than 9,000 Btu;

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

21 (III) 50 percent for coal of less
22 than 7,000 Btu.

23 (2) OTHER PROJECTS.—For projects not de-
24 scribed in paragraph (1), the Secretary shall set
25 technical milestones specifying emissions levels. The

1 milestones shall be designed to increasingly restrict
2 emissions levels through the life of the program. The
3 milestones shall be designed to achieve by 2010
4 projects able—

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

6 (B) to emit no more than .08 lb of NO_x
7 per million BTU;

8 (C) to achieve substantial reductions in
9 mercury emissions; and

10 (D) except as provided in paragraph (4),
11 to achieve a thermal efficiency of—

12 (i) 45 percent for coal of more than
13 9,000 Btu;

14 (ii) 44 percent for coal of 7,000 to
15 9,000 Btu; and

16 (iii) 40 percent for coal of less than
17 7,000 Btu.

18 (3) CONSULTATION.—Before setting the tech-
19 nical milestones under paragraphs (1)(B) and (2),
20 the Secretary shall consult with the Administrator of
21 the Environmental Protection Agency and interested
22 entities, including coal producers, industries using
23 coal, organizations to promote coal or advanced coal
24 technologies, environmental organizations, and orga-
25 nizations representing workers.

1 (4) EXISTING UNITS.—In the case of projects
2 at coal-powered electricity generating facilities exist-
3 ing as of the date of enactment of this Act, in lieu
4 of the thermal efficiency requirements set forth in
5 paragraph (1)(B)(iv) and (2)(D), the projects shall
6 be designed to achieve an overall thermal efficiency
7 improvement, compared to the efficiency of the unit
8 as of the date of enactment of this Act, of not less
9 than—

10 (A) 7 percent for coal of more than 9,000

11 Btu;

12 (B) 6 percent for coal of 7,000 to 9,000

13 Btu; and

14 (C) 4 percent for coal of less than 7,000

15 Btu.

16 (5) PERMITTED USES.—In allocating amounts
17 made available under this title, the Secretary may
18 fund projects that include as part of the project the
19 separation and capture of carbon dioxide.

20 (c) FINANCIAL CRITERIA.—The Secretary shall not
21 provide a funding award under this title unless the recipi-
22 ent has documented to the satisfaction of the Secretary
23 that—

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

1 (2) the recipient will provide sufficient informa-
2 tion to the Secretary for the Secretary to ensure
3 that the award funds are spent efficiently and effec-
4 tively; and

5 (3) a market exists for the technology being
6 demonstrated or applied, as evidenced by statements
7 of interest in writing from potential purchasers of
8 the technology.

9 (d) FINANCIAL ASSISTANCE.—The Secretary shall
10 provide financial assistance to projects that meet the re-
11 quirements of subsections (a), (b), and (c) and are likely
12 to—

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

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

19 (3) demonstrate methods and equipment that
20 are applicable to 25 percent of the electricity gener-
21 ating facilities that use coal as the primary feedstock
22 as of the date of the enactment of this Act.

23 (e) FEDERAL SHARE.—The Federal share of the cost
24 of a project funded under this title shall not exceed 50
25 percent.

1 (f) APPLICABILITY.—No technology, or level of emis-
2 sion reduction, shall be treated as adequately dem-
3 onstrated for purposes of any other statute solely by rea-
4 son of the use of such technology, or the achievement of
5 such emission reduction, by one or more facilities receiving
6 assistance under this title, unless this title is specifically
7 referenced in such statute.

8 **SEC. 202. REPORT.**

9 Not later than 1 year after the date of the enactment
10 of this Act, and once every 2 years thereafter through
11 2012, the Secretary, in consultation with other appro-
12 priate Federal agencies, shall transmit to the Congress a
13 report describing—

14 (1) the technical milestones set forth in section
15 201 and how those milestones ensure progress to-
16 ward meeting the requirements of subsections
17 (b)(1)(B) and (b)(2) of section 201; and

18 (2) the status of projects funded under this
19 title.

20 **SEC. 203. CLEAN COAL CENTERS OF EXCELLENCE.**

21 As part of the program authorized under this title,
22 the Secretary shall award competitive, merit-based grants
23 to universities for the establishment of Centers of Excel-
24 lence for Energy Systems of the Future. The Secretary
25 shall provide grants to universities that can show the

1 greatest potential for advancing new clean coal tech-
2 nologies.

3 **SEC. 204. 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 2005 through 2013, to remain available until ex-
9 pended.

10 (b) LIMIT ON USE OF FUNDS.—

11 (1) OBLIGATION OF FUNDS.—The Secretary is
12 authorized to obligate the use of funds under this
13 section prior to the fiscal year such funds are au-
14 thorized for under subsection (a), subject to appro-
15 priations.

16 (2) REPORT.—The Secretary shall transmit to
17 the Congress a report describing the proposed use of
18 funds which includes—

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

23 (B) a detailed description of how proposals
24 will be solicited and evaluated, including a list
25 of all activities expected to be undertaken;

1 (C) a detailed list of technical milestones
2 for each technology that will be pursued; and

3 (D) a detailed description of how the ini-
4 tiative under this title will avoid problems enu-
5 merated in General Accounting Office reports
6 on the Clean Coal Technology Program, includ-
7 ing problems that have resulted in unspent
8 funds and projects that failed either financially
9 or scientifically.

10 (3) USE OF FUNDS.—The Secretary may not
11 use funds appropriated under this section until 30
12 days have elapsed after receipt of the report under
13 paragraph (2).

14 (c) APPLICABILITY.—Subsection (b) shall not apply
15 to any project selected before September 30, 2004.

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