

110TH CONGRESS
1ST SESSION

H. R. 3775

IN THE SENATE OF THE UNITED STATES

OCTOBER 23, 2007

Received; read twice and referred to the Committee on Energy and Natural
Resources

AN ACT

To support research and development of new industrial processes and technologies that optimize energy efficiency and environmental performance, utilize diverse sources of energy, and increase economic competitiveness.

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

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Industrial Energy Effi-
3 ciency Research and Development Act of 2007”.

4 **SEC. 2. FINDINGS.**

5 The Congress finds the following:

6 (1) According to the Energy Information Ad-
7 ministration’s 2006 Annual Energy Review, the in-
8 dustrial sector in 2006 accounted for more energy
9 use (32 percent) than the residential (21 percent),
10 commercial (18 percent), or transportation sector
11 (29 percent).

12 (2) The primary energy intensive industries
13 vital to maintaining our country’s infrastructure and
14 economic and national security include steel, chemi-
15 cals, metal casting, forest products, glass, aluminum,
16 petroleum refining, and mining, as well as other en-
17 ergy intensive manufacturers.

18 (3) The Department of Energy has dem-
19 onstrated the success of public-private partnerships
20 with these industries resulting in research, develop-
21 ment, and deployment of new energy efficient tech-
22 nologies which reduce emissions and improve manu-
23 facturing competitiveness.

24 (4) Innovations in manufacturing processes
25 within these industries may be translated into effi-
26 ciency improvements in buildings, transportation,

1 and other economic sectors that depend upon these
2 industries.

3 (5) While past public-private partnerships have
4 resulted in significant energy efficiency improve-
5 ments in manufacturing processes, there is a need
6 for new technologies to achieve continual energy effi-
7 ciency improvements.

8 (6) Innovations made in the last few decades
9 assisted the United States in remaining competitive
10 in the global market. Continued innovation in the
11 areas of energy efficiency and feedstock diversifica-
12 tion are necessary to enable the United States to
13 maintain a competitive edge.

14 (7) The Department of Energy should continue
15 collaborative efforts with industry, particularly the
16 manufacturing sector, to broaden and accelerate the
17 high-risk research and development of new manufac-
18 turing processes that optimize energy efficiency and
19 utilize diverse sources of energy.

20 (8) These partnerships support critical research
21 and development capabilities at universities and
22 other research institutions while training future gen-
23 erations of engineers in critical areas of energy sys-
24 tems and efficient industrial process technologies for
25 our domestic industries.

1 **SEC. 3. INDUSTRIAL TECHNOLOGIES PROGRAM.**

2 (a) IN GENERAL.—The Secretary of Energy (in this
3 Act referred to as the “Secretary”) shall establish a pro-
4 gram, in cooperation with energy-intensive industries,
5 trade and industry research collaborations representing
6 such industries, and institutions of higher education—

7 (1) to conduct energy research, development,
8 demonstration, and commercial application activities
9 with respect to new industrial and commercial pro-
10 cesses, technologies, and methods to—

11 (A) achieve substantial improvements in
12 energy efficiency; and

13 (B) enhance the economic competitiveness
14 of the United States industrial sector; and

15 (2) to conduct environmental research and de-
16 velopment with respect to new industrial and com-
17 mercial processes, technologies, and methods to
18 achieve environmental performance improvements
19 such as waste reduction, emissions reductions, and
20 more efficient water use.

21 (b) PROGRAM ACTIVITIES.—Research, development,
22 demonstration, and commercial application activities
23 under this section may include—

24 (1) activities to support the development and
25 use of technologies and processes that improve the

1 quality and quantity of feedstocks recovered or recycled from process and waste streams;

2 (2) research to meet manufacturing feedstock requirements with alternative resources;

3 (3) research to develop and demonstrate technologies and processes that utilize alternative energy sources to supply heat, power, and new feedstocks for energy-intensive industries;

4 (4) research to achieve energy efficiency in steam, power, control system, and process heat technologies, and in other manufacturing processes; and

5 (5) a program to fund research, development, and demonstration relating to inventors' and small companies' technology proposals, based on energy savings potential, commercial viability, and technical merit.

6 (c) COMPETITIVE AWARDS.—All awards under this section shall be made on a competitive, merit-reviewed basis.

7 (d) COORDINATION AND NONDUPLICATION.—The Secretary shall, coordinate efforts under this section with other programs of the Department and other Federal agencies, to avoid duplication of effort.

8 (e) ANNUAL REPORT.—Not later than 1 year after the date of enactment of this Act, and once every 2 years

1 thereafter, the Secretary shall submit to the Congress a
2 report on the activities conducted pursuant to this Act,
3 including—

4 (1) a description of the activities used to facili-
5 tate cooperation with energy-intensive industries,
6 universities, and other participants in the program;
7 and

8 (2) a description of ongoing projects and new
9 projects initiated, and the anticipated energy savings
10 associated with achievement of each project's goals.

11 **SEC. 4. UNIVERSITY-BASED INDUSTRIAL RESEARCH AND**
12 **ASSESSMENT CENTERS.**

13 To strengthen the program under section 3, the Sec-
14 retary shall provide funding to university-based industrial
15 research and assessment centers, whose purpose shall
16 be—

17 (1) to identify opportunities for optimizing en-
18 ergy efficiency and environmental performance;

19 (2) to promote application of emerging concepts
20 and technologies in small and medium-sized manu-
21 facturers;

22 (3) to promote the research and development
23 for usage of alternative energy sources to supply
24 heat, power, and new feedstocks for energy intensive
25 industries;

