

AMENDMENT TO THE COMMITTEE PRINT
OFFERED BY MR. WYNN OF MARYLAND

In title VIII, add at the end the following new section:

1 **SEC. 810. SOLAR AND WIND TECHNOLOGIES.**

2 (a) SOLAR ENERGY TECHNOLOGIES.—The Secretary
3 shall—

4 (1) prepare a detailed roadmap for carrying out
5 the provisions in this subtitle related to solar energy
6 technologies and for implementing the recommenda-
7 tions related to solar energy technologies that are in-
8 cluded in the report transmitted under subsection
9 (c);

10 (2) provide for the establishment of 5 projects
11 in geographic areas that are regionally and climati-
12 cally diverse to demonstrate the production of hydro-
13 gen at solar energy facilities, including one dem-
14 onstration project at a national laboratory or institu-
15 tion of higher education;

16 (3) establish a research and development
17 program—



1 (A) to develop optimized concentrating
2 solar power devices that may be used for the
3 production of both electricity and hydrogen; and

4 (B) to evaluate the use of thermochemical
5 cycles for hydrogen production at the tempera-
6 tures attainable with concentrating solar power
7 devices;

8 (4) coordinate with activities sponsored by the
9 Department of Energy's Office of Nuclear Energy,
10 Science, and Technology on high-temperature mate-
11 rials, thermochemical cycles, and economic issues re-
12 lated to solar energy;

13 (5) provide for the construction and operation
14 of new concentrating solar power devices or solar
15 power cogeneration facilities that produce hydrogen
16 either concurrently with, or independently of, the
17 production of electricity;

18 (6) support existing facilities and research pro-
19 grams dedicated to the development and advance-
20 ment of concentrating solar power devices; and

21 (7) establish a program—

22 (A) to research and develop methods that
23 use electricity from photovoltaic devices for the
24 onsite production of hydrogen, such that no in-
25 termediate transmission or distribution infra-



1 structure is required or used and future de-
2 mand growth may be accommodated;

3 (B) to evaluate the economics of small-
4 scale electrolysis for hydrogen production; and

5 (C) to research the potential of modular
6 photovoltaic devices for the development of a
7 hydrogen infrastructure, the security implica-
8 tions of a hydrogen infrastructure, and the ben-
9 efits potentially derived from a hydrogen infra-
10 structure.

11 (b) WIND ENERGY TECHNOLOGIES.—The Secretary
12 shall—

13 (1) prepare a detailed roadmap for carrying out
14 the provisions in this subtitle related to wind energy
15 technologies and for implementing the recommenda-
16 tions related to wind energy technologies that are in-
17 cluded in the report transmitted under subsection
18 (c); and

19 (2) provide for the establishment of 5 projects
20 in geographic areas that are regionally and climati-
21 cally diverse to demonstrate the production of hydro-
22 gen at existing wind energy facilities, including one
23 demonstration project at a national laboratory or in-
24 stitution of higher education.



1 (c) PROGRAM SUPPORT.—The Secretary shall sup-
2 port research programs at institutions of higher education
3 for the development of solar energy technologies and wind
4 energy technologies for the production of hydrogen. The
5 research programs supported under this subsection
6 shall—

7 (1) enhance fellowship and faculty assistance
8 programs;

9 (2) provide support for fundamental research;

10 (3) encourage collaborative research among in-
11 dustry, national laboratories, and institutions of
12 higher education;

13 (4) support communication and outreach; and

14 (5) to the greatest extent possible—

15 (A) be located in geographic areas that are
16 regionally and climatically diverse; and

17 (B) be located at part B institutions, mi-
18 nority institutions, and institutions of higher
19 education located in States participating in the
20 Experimental Program to Stimulate Competi-
21 tive Research of the Department of Energy.

22 (d) INSTITUTIONS OF HIGHER EDUCATION AND NA-
23 TIONAL LABORATORY INTERACTIONS.—In conjunction
24 with the programs supported under this section, the Sec-
25 retary shall develop sabbatical, fellowship, and visiting sci-



1 entist programs to encourage national laboratories and in-
2 stitutions of higher education to share and exchange per-
3 sonnel.

4 (e) DEFINITIONS.—For purposes of this section—

5 (1) the term “concentrating solar power de-
6 vices” means devices that concentrate the power of
7 the sun by reflection or refraction to improve the ef-
8 ficiency of a photovoltaic or thermal generation proc-
9 ess;

10 (2) the term “institution of higher education”
11 has the meaning given to that term in section
12 101(a) of the Higher Education Act of 1965 (20
13 U.S.C. 1001(a));

14 (3) the term “minority institution” has the
15 meaning given to that term in section 365 of the
16 Higher Education Act of 1965 (20 U.S.C. 1067k);

17 (4) the term “part B institution” has the mean-
18 ing given to that term in section 322 of the Higher
19 Education Act of 1965 (20 U.S.C. 1061); and

20 (5) the term “photovoltaic devices” means de-
21 vices that convert light directly into electricity
22 through a solid-state, semiconductor process.

