

AMENDMENT TO H.R. 3607
OFFERED BY MR. TONKO OF NEW YORK

Page 21, strike lines 14 through 17 and insert the following:

1 “(1) High-efficiency turbines in accordance with
2 the program under section 969A–1.”.

Page 22, line 22, insert “and section 969A–1” after
“this section”.

Page 23, after line 2, insert the following:

3 **“SEC. 969A–1. HIGH EFFICIENCY GAS TURBINES.**

4 “(a) IN GENERAL.—The Secretary of Energy,
5 through the Office of Fossil Energy, shall carry out a
6 multiyear, multiphase program of research, development,
7 and technology demonstration to improve the efficiency of
8 gas turbines used in power generation systems and to
9 identify the technologies that ultimately will lead to gas
10 turbine combined cycle efficiency of 67 percent or simple
11 cycle efficiency of 50 percent.

12 “(b) PROGRAM ELEMENTS.—The program under this
13 section shall—

1 “(1) support first-of-a-kind engineering and de-
2 tailed gas turbine design for megawatt-scale and
3 utility-scale electric power generation, including—

4 “(A) high temperature materials, including
5 superalloys, coatings, and ceramics;

6 “(B) improved heat transfer capability;

7 “(C) manufacturing technology required to
8 construct complex three-dimensional geometry
9 parts with improved aerodynamic capability;

10 “(D) combustion technology to produce
11 higher firing temperature while lowering nitro-
12 gen oxide and carbon monoxide emissions per
13 unit of output;

14 “(E) advanced controls and systems inte-
15 gration;

16 “(F) advanced high performance com-
17 pressor technology; and

18 “(G) validation facilities for the testing of
19 components and subsystems;

20 “(2) include technology demonstration through
21 component testing, subscale testing, and full-scale
22 testing in existing fleets;

23 “(3) include field demonstrations of the devel-
24 oped technology elements so as to demonstrate tech-
25 nical and economic feasibility; and

1 “(4) assess overall combined cycle and simple
2 cycle system performance.

3 “(c) PROGRAM GOALS.—The goals of the multiphase
4 program established under subsection (a) shall be—

5 “(1) in phase I—

6 “(A) to develop the conceptual design of
7 advanced high efficiency gas turbines that can
8 achieve at least 65-percent combined cycle effi-
9 ciency or 47-percent simple cycle efficiency on
10 a lower heating value basis; and

11 “(B) to develop and demonstrate the tech-
12 nology required for advanced high efficiency gas
13 turbines that can achieve at least 65-percent
14 combined cycle efficiency or 47-percent simple
15 cycle efficiency on a lower heating value basis;
16 and

17 “(2) in phase II, to develop the conceptual de-
18 sign for advanced high efficiency gas turbines that
19 can achieve at least 67-percent combined cycle effi-
20 ciency or 50-percent simple cycle efficiency on a
21 lower heating value basis.

22 “(d) PROPOSALS.—Within 180 days after the date of
23 enactment of this Act, the Secretary shall solicit grant and
24 contract proposals from industry, small businesses, univer-
25 sities, and other appropriate parties for conducting activi-

1 ties under this Act. In selecting proposals, the Secretary
2 shall emphasize—

3 “(1) the extent to which the proposal will stim-
4 ulate the creation or increased retention of jobs in
5 the United States; and

6 “(2) the extent to which the proposal will pro-
7 mote and enhance United States technology leader-
8 ship.

9 “(e) COMPETITIVE AWARDS.—The provision of fund-
10 ing under this section shall be on a competitive basis with
11 an emphasis on technical merit.

12 “(f) COST SHARING.—Section 988 of the Energy Pol-
13 icy Act of 2005 (42 U.S.C. 16352) shall apply to an award
14 of financial assistance made under this section.

15 “(g) LIMITS ON PARTICIPATION.—The limits on par-
16 ticipation applicable under section 999E of the Energy
17 Policy Act of 2005 (42 U.S.C. 16375) shall apply to finan-
18 cial assistance awarded under this section.”.

