

**AMENDMENT TO THE AMENDMENT IN THE  
NATURE OF A SUBSTITUTE TO H.R. 3696  
OFFERED BY MR. PAYNE OF NEW JERSEY**

Page 53, beginning line 3, insert the following (and conform the table of contents accordingly):

1 **SEC. 206. NATIONAL RESEARCH COUNCIL STUDY ON THE**  
2 **RESILIENCE AND RELIABILITY OF THE NA-**  
3 **TION'S POWER GRID.**

4 (a) INDEPENDENT STUDY.—Not later than 60 days  
5 after the date of the enactment of this Act, the Secretary  
6 of Homeland Security, in coordination with the heads of  
7 other departments and agencies, as necessary, shall enter  
8 into an agreement with the National Research Council to  
9 conduct research of the future resilience and reliability of  
10 the Nation's electric power transmission and distribution  
11 system. The research under this subsection shall be known  
12 as the “Saving More American Resources Today Study”  
13 or the “SMART Study”. In conducting such research, the  
14 National Research Council shall—

15 (1) research the options for improving the Na-  
16 tion's ability to expand and strengthen the capabili-  
17 ties of the Nation's power grid, including estimation  
18 of the cost, time scale for implementation, and iden-

1           tification of the scale and scope of any potential sig-  
2           nificant health and environmental impacts;

3           (2) consider the forces affecting the grid, in-  
4           cluding technical, economic, regulatory, environ-  
5           mental, and geopolitical factors, and how such forces  
6           are likely to affect—

7           (A) the efficiency, control, reliability and  
8           robustness of operation;

9           (B) the ability of the grid to recover from  
10          disruptions, including natural disasters and ter-  
11          rorist attacks;

12          (C) the ability of the grid to incorporate  
13          greater reliance on distributed and intermittent  
14          power generation and electricity storage;

15          (D) the ability of the grid to adapt to  
16          changing patterns of demand for electricity; and

17          (E) the economic and regulatory factors  
18          affecting the evolution of the grid;

19          (3) review Federal, State, industry, and aca-  
20          demic research and development programs and iden-  
21          tify technological options that could improve the fu-  
22          ture grid;

23          (4) review the implications of increased reliance  
24          on digital information and control of the power grid  
25          for improving reliability, resilience, and congestion

1 and for potentially increasing vulnerability to cyber  
2 attack;

3 (5) review regulatory, industry, and institu-  
4 tional factors and programs affecting the future of  
5 the grid;

6 (6) research the costs and benefits, as well as  
7 the strengths and weaknesses, of the options identi-  
8 fied under paragraph (1) to address the emerging  
9 forces described in paragraph (2) that are shaping  
10 the grid;

11 (7) identify the barriers to realizing the options  
12 identified and suggest strategies for overcoming  
13 those barriers including suggested actions, priorities,  
14 incentives, and possible legislative and executive ac-  
15 tions; and

16 (8) research the ability of the grid to integrate  
17 existing and future infrastructure, including utilities,  
18 telecommunications lines, highways, and other crit-  
19 ical infrastructure.

20 (b) COOPERATION AND ACCESS TO INFORMATION  
21 AND PERSONNEL.—The Secretary shall ensure that the  
22 National Research Council receives full and timely co-  
23 operation, including full access to information and per-  
24 sonnel, from the Department of Homeland Security, the  
25 Department of Energy, including the management and op-

1 erating components of the Departments, and other Fed-  
2 eral departments and agencies, as necessary, for the pur-  
3 poses of conducting the study described in subsection (a).

4 (c) REPORT.—

5 (1) IN GENERAL.—Not later than 18 months  
6 from the date on which the Secretary enters into the  
7 agreement with the National Research Council de-  
8 scribed in subsection (a), the National Research  
9 Council shall submit to the Secretary and the Com-  
10 mittee on Homeland Security of the House of Rep-  
11 resentatives and the Committee on Homeland Secu-  
12 rity and Governmental Affairs of the Senate a report  
13 containing the findings of the research required by  
14 that subsection.

15 (2) FORM OF REPORT.—The report under para-  
16 graph (1) shall be submitted in unclassified form,  
17 but may include a classified annex.

18 (d) FUNDING.—Of the amounts authorized to be ap-  
19 propriated for 2014 for the Department of Homeland Se-  
20 curity, the Secretary of Homeland Security is authorized  
21 to obligate and expend not more than \$2,000,000 for the  
22 National Research Council report.

