PART B - TEXT OF THE AMENDMENT IN THE NATURE OF A SUBSTITUTE TO BE MADE IN ORDER

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AMENDMENT IN THE NATURE OF A SUBSTITUTE TO H.R. 2454 OFFERED BY MR. FORBES OF VIRGINIA

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "New Manhattan Project for Energy Independence".

SEC. 2. DEFINITIONS.

In this Act—

(1) COMMISSION.—The term "Commission" means the Commission established under section 7.

(2) RESEARCH.—The term "research" includes research on the technologies, materials, and manufacturing processes required to achieve the goals described in section 3.

SEC. 3. GOALS.

(a) IN GENERAL.—The purpose of this Act is to enable the achievement of each of the following goals:

(1) VEHICLE FUEL EFFICIENCIES AND ALTERNATIVE FUEL SOURCES.—Development and manufacturing of a plug-in hybrid vehicle, alternative fuel

1 vehicle, electric vehicle, hydrogen fuel cell vehicle, or
2 other alternative technology vehicle—
3 (A) that is not more than 10 percent more
4 expensive than a comparable model vehicle of
5 the same model year;
6 (B) with—
7 (i) equal acceleration, horsepower, and
8 top speed performance; and
9 (ii) not more than 20 percent reduc-
10 tion in cargo space,
11 as compared to a comparable model vehicle of
12 the same model year;
13 (C) that meets or exceeds Federal safety
14 standards;
15 (D) that can travel at least 750 miles be-
16 tween refueling; and
17 (E) in the case of a gasoline powered vehi-
18 cle, that can travel at least 70 miles per gallon
19 of gasoline.
20 (2) GREEN BUILDINGS.—Develop and build an
21 energy efficient residential or commercial building
22 that—
23 (A) uses no more than 50 percent of the
24 energy of the average new building of similar
25 size and type;

1 (B) costs no more than 15 percent more to
2 construct than the cost of a building of similar
3 size and type; and
4 (C) can be effectively reproduced in a vari-
5 ety of climate environments found in the United
6 States.
7 (3) SOLAR POWER.—Construction of a large
8 scale solar thermal power plant or solar photovoltaic
9 power plant capable of generating 300 megawatts or
10 more at a cost of 10 cents or less per kilowatt-hour
11 when all capital and operating expenses are cal-
12 culated into the cost.
13 (4) BIOFUELS.—Development and production
14 of a biofuel that, when mass produced, does not ex-
15 ceed 105 percent of the cost for the energy equiva-
16 lent of unleaded gasoline when all capital and oper-
17 ating expenses are calculated into the cost of the
18 biofuel.
19 (5) CARBON SEQUESTRATION.—Development
20 and implementation of a carbon capture and storage
21 system for a large scale coal-burning power plant
22 that does not increase operating costs more than 15
23 percent compared to a baseline design without car-
24 bon capture and storage while providing an esti-

1 mated chance of carbon dioxide escape no greater
2 than 1 percent over 5,000 years.
3 (6) NUCLEAR WASTE.—Development of both—
4 (A) a validated process for remediation of
5 the radioactive waste form so it is no longer
6 harmful to the health or welfare of the environ-
7 ment or individuals for a period to be deter-
8 mined by the Commission, which shall be not
9 less than 5,000 years; and
10 (B) a model that accounts for all the ef-
11 fects of nuclear waste in that process.
12 (7) NUCLEAR FUSION.—Development of a sus-
13 tainable nuclear fusion reaction capable of providing
14 a large-scale (greater than 300 megawatts), sustain-
15 able source of electricity for residential, commercial,
16 or government entities.
17 (b) AMENDMENT OF GOALS.—The Secretary of En-
18 ergy may amend a goal described in subsection (a) pursu-
19 ant to a recommendation from the Commission under sec-
20 tion 7(b)(5), or on his own initiative, if such amendment
21 serves the purpose of achieving the goal of United States
22 energy independence through the development of tech-
23 nologies that lead to the widespread adoption of improve-
24 ments that increase energy supply or energy efficiency.

1 **SEC. 4. SUMMIT.**

2 (a) IN GENERAL.—Not later than 60 days after the
3 date of enactment of this Act, the President shall convene
4 a summit that includes—

5 (1) the principal advisors and directors of all
6 programs in the Federal Government related to the
7 achievement of the goals described in section 3;

8 (2) the members of the Commission; and

9 (3) leading researchers at the Federal labora-
10 tories and representatives of private sector partners
11 engaged in the production and manufacturing of
12 technologies necessary to achieve the goals described
13 in section 3.

14 (b) PURPOSE.—The summit shall be for the purpose
15 of reviewing the progress and promise for each of these
16 technologies, the interrelationship of these technologies to
17 each other, and additional funding resources needed to ac-
18 celerate the progress of these programs toward achieving
19 the goals described in section 3.

20 **SEC. 5. GRANT PROGRAM.**

21 (a) IN GENERAL.—The Secretary of Energy, in con-
22 sultation with the Secretary of Defense, the Secretary of
23 Transportation, the Administrator of the Environmental
24 Protection Agency, and other Federal agencies as appro-
25 priate, shall carry out a program consisting of a collabo-
26 rative effort with industry, government, and academia to

1 support research, development, demonstration, and com-
2 mercial application activities related to achieving the goals
3 described in section 3.

4 (b) GRANTS.—Such program shall consist of grants
5 to researchers, large and small businesses, National Lab-
6 oratories, institutions of higher education, or any other
7 qualified applicant, including veterans.

8 (c) LIMITATION ON AMOUNT.—No grant shall be
9 made under this section in an amount that exceeds 5 per-
10 cent of the amount authorized under section 8(1) for
11 prizes for the achievement of the same goal.

12 (d) COST SHARING.—The Federal share of the costs
13 of a project for which a grant is made under this section
14 shall not exceed 15 percent.

15 **SEC. 6. PRIZE PROGRAM.**

16 (a) PRIZE AUTHORITY.—

17 (1) IN GENERAL.—The Secretary of Energy
18 shall carry out a program to competitively award
19 cash prizes in conformity with this section to ad-
20 vance the research, development, demonstration, and
21 commercial application necessary to achieve the
22 goals described in section 3.

23 (2) ADVERTISING AND SOLICITATION OF COM-
24 PETITORS.—

1 (A) ADVERTISING.—The Secretary shall
2 widely advertise prize competitions under this
3 section to encourage broad participation by re-
4 searchers, large and small businesses, institu-
5 tions of higher education, and any other quali-
6 fied applicants, including veterans.
7 (B) ANNOUNCEMENT THROUGH FEDERAL
8 REGISTER NOTICE.—The Secretary shall an-
9 nounce each prize competition under this sec-
10 tion by publishing a notice in the Federal Reg-
11 ister. This notice shall include essential ele-
12 ments of the competition such as the subject of
13 the competition, the duration of the competi-
14 tion, the eligibility requirements for participa-
15 tion in the competition, the process for partici-
16 pants to register for the competition, the
17 amount of the prize, and the criteria for award-
18 ing the prize, which shall include, at a min-
19 imum, the achievement of one of the goals de-
20 scribed in section 3.
21 (3) ANNOUNCEMENT OF PRIZES.—The Sec-
22 retary may not issue a notice required by paragraph
23 (2)(B) until all the funds needed to pay out the an-
24 nounced amount of the prize have been appro-
25 priated.

1 (b) PRIZE CATEGORIES.—

2 (1) CATEGORIES.—The Secretary of Energy
3 shall establish a single prize under this section for
4 each of the goals described in paragraphs (1)
5 through (7) of section 3.

6 (2) CRITERIA.—In establishing the criteria re-
7 quired by this section, the Secretary—

8 (A) shall consult with other Federal agen-
9 cies, including the National Science Founda-
10 tion; and

11 (B) may consult with other experts such as
12 private organizations, including professional so-
13 cieties, industry associations, and the National
14 Academy of Sciences and the National Academy
15 of Engineering.

16 (c) ELIGIBILITY.—To be eligible to win a prize under
17 this section, an individual or entity—

18 (1) shall have complied with all the require-
19 ments in accordance with the Federal Register no-
20 tice required under subsection (a)(2)(B);

21 (2) in the case of a private entity, shall be in-
22 corporated in and maintain a primary place of busi-
23 ness in the United States, and in the case of an in-
24 dividual, whether participating singly or in a group,

1 shall be a citizen of, or an alien lawfully admitted
2 for permanent residence in, the United States; and
3 (3) shall not be a Federal entity, a Federal em-
4 ployee acting within the scope of his employment, or
5 an employee of a national laboratory acting within
6 the scope of his employment.
7 (d) AWARD SELECTION.—
8 (1) IN GENERAL.—The Secretary of Energy
9 shall award prizes under this section on the basis of
10 the criteria published in the notice required under
11 subsection (a)(2)(B), after receiving the rec-
12 ommendations of the Commission under section
13 7(b)(3).
14 (2) CONGRESSIONAL NOTIFICATION.—If the
15 Secretary awards a prize under paragraph (1) in a
16 manner that does not conform to the recommenda-
17 tions of the Commission, the Secretary shall trans-
18 mit a report to the Congress explaining the reasons
19 for such action.
20 (e) INTELLECTUAL PROPERTY.—The Federal Gov-
21 ernment shall not, by virtue of offering or awarding a
22 prize under this section, be entitled to any intellectual
23 property rights derived as a consequence of, or direct rela-
24 tion to, the participation by a registered participant in a
25 competition authorized by this section. This subsection

1 shall not be construed to prevent the Federal Government
2 from negotiating a license for the use of intellectual prop-
3 erty developed for a prize competition under this section.
4 (f) LIABILITY.—
5 (1) WAIVER OF LIABILITY.—The Secretary of
6 Energy may require registered participants to waive
7 claims against the Federal Government (except
8 claims for willful misconduct) for any injury, death,
9 damage, or loss of property, revenue, or profits aris-
10 ing from the registered participants' participation in
11 a competition under this section. The Secretary shall
12 give notice of any waiver required under this para-
13 graph in the notice required by subsection (a)(2)(B).
14 (2) LIABILITY INSURANCE.—
15 (A) REQUIREMENTS.—Registered partici-
16 pants in a prize competition under this section
17 shall be required to obtain liability insurance or
18 demonstrate financial responsibility, in amounts
19 determined by the Secretary, for claims by—
20 (i) a third party for death, bodily in-
21 jury, or property damage or loss resulting
22 from an activity carried out in connection
23 with participation in a competition under
24 this section; and

1 (ii) the Federal Government for dam-
2 age or loss to Government property result-
3 ing from such an activity.
4 (B) FEDERAL GOVERNMENT INSURED.—
5 The Federal Government shall be named as an
6 additional insured under a registered partici-
7 pant's insurance policy required under subpara-
8 graph (A) with respect to claims described in
9 clause (i) of that subparagraph, and registered
10 participants shall be required to agree to in-
11 demnify the Federal Government against third
12 party claims for damages arising from or re-
13 lated to competition activities under this sec-
14 tion.
15 (g) NONSUBSTITUTION.—The programs created
16 under this section shall not be considered a substitute for
17 Federal research and development programs.
18 **SEC. 7. COMMISSION.**
19 (a) ESTABLISHMENT.—There shall be established the
20 New Manhattan Project Commission on Energy Independ-
21 ence.
22 (b) FUNCTIONS.—The Commission shall—
23 (1) not later than 1 year after the date of en-
24 actment of this Act, submit to Congress and the
25 President a report containing—

1 (A) recommendations on steps that must
2 be taken in order for the United States to
3 achieve 50 percent energy independence within
4 10 years and 100 percent energy independence
5 within 20 years; and
6 (B) an assessment of the impact of foreign
7 energy dependence on United States national
8 security;
9 (2) advise the Secretary of Energy on the de-
10 sign and operation of the grant program established
11 under section 5;
12 (3) make recommendations to the Secretary of
13 Energy on the design and operation, including selec-
14 tion criteria, of the prize program carried out under
15 section 6;
16 (4) make recommendations to the Secretary of
17 Energy selecting participants who have achieved a
18 goal for which a prize will be awarded under section
19 6; and
20 (5) submit recommendations to Congress for
21 any amendments to make the goals described in sec-
22 tion 3 more stringent, as appropriate because of
23 changing circumstances, if such amendments serve
24 the purpose of achieving the goal of United States
25 energy independence through the development of

1 technologies that lead to the widespread adoption of
2 improvements that increase energy supply or energy
3 efficiency.
4 (c) MEMBERSHIP.—The Commission shall be com-
5 posed of 13 members as follows:
6 (1) The Under Secretary for Science of the De-
7 partment of Energy.
8 (2) The Administrator of the Research and In-
9 novative Technology Administration.
10 (3) The Director of the National Science Foun-
11 dation.
12 (4) The Chairman of the Federal Laboratory
13 Consortium for Technology Transfer.
14 (5) The President of the National Academy of
15 Sciences.
16 (6) 2 members appointed by the Speaker of the
17 House of Representatives.
18 (7) 2 members appointed by the minority leader
19 of the House of Representatives.
20 (8) 2 members appointed by the majority leader
21 of the Senate.
22 (9) 2 members appointed by the minority leader
23 of the Senate.
24 (d) TERMS OF MEMBERSHIP.—Each member of the
25 Commission appointed under subsection (c)(6) through

1 (9) shall be appointed for a term of two years, except that
2 of the members first appointed, one under each of those
3 paragraphs shall be appointed for a term of one year. A
4 member of the Commission may serve after the expiration
5 of the member's term until a successor has taken office.
6 (e) VACANCIES.—A vacancy in the Commission shall
7 not affect its powers but, in the case of a member ap-
8 pointed under subsection (c)(6) through (9), shall be filled
9 in the same manner as the original appointment was
10 made. Any member appointed to fill a vacancy for an un-
11 expired term shall be appointed for the remainder of such
12 term.
13 (f) QUORUM.—Seven members of the Commission
14 shall constitute a quorum.
15 (g) MEETINGS.—The Commission shall meet at the
16 call of the Chairman or a majority of its members.
17 (h) COMPENSATION.—(1) Each member of the Com-
18 mission shall serve without compensation.
19 (2) While away from their homes or regular places
20 of business in the performance of duties for the Commis-
21 sion, members of the Commission shall be allowed travel
22 expenses, including per diem in lieu of subsistence, at
23 rates authorized for employees of agencies under sections
24 5702 and 5703 of title 5, United States Code.

1 (i) STAFF.—Subject to rules prescribed by the Com-
2 mission, the Commission may appoint personnel as it con-
3 siders appropriate.

4 (j) APPLICABILITY OF CERTAIN CIVIL SERVICE
5 LAWS.—The staff of the Commission shall be appointed
6 subject to the provisions of title 5, United States Code,
7 governing appointments in the competitive service, and
8 shall be paid in accordance with the provisions of chapter
9 51 and subchapter III of chapter 53 of that title relating
10 to classification and General Schedule pay rates.

11 (k) EXPERTS AND CONSULTANTS.—The Commission
12 may procure temporary and intermittent services under
13 section 3109(b) of title 5, United States Code.

14 (l) HEARINGS AND SESSIONS.—The Commission
15 may, for the purpose of carrying out this Act, hold hear-
16 ings, sit and act at times and places, take testimony, and
17 receive evidence as the Commission considers appropriate.

18 (m) POWERS OF MEMBERS AND AGENTS.—Any
19 member or agent of the Commission may, if authorized
20 by the Commission, take any action which the Commission
21 is authorized to take by this section.

22 (n) OBTAINING OFFICIAL DATA.—The Commission
23 may secure directly from any department or agency of the
24 United States information necessary to enable it to carry
25 out this Act. Upon request of the Commission, the head

1 of that department or agency shall furnish that informa-
2 tion to the Commission.
3 (o) SUBPOENA POWER.—
4 (1) IN GENERAL.—The Commission may issue
5 subpoenas requiring the attendance and testimony of
6 witnesses and the production of any evidence relat-
7 ing to any matter under investigation by the Com-
8 mission. The attendance of witnesses and the pro-
9 duction of evidence may be required from any place
10 within the United States at any designated place of
11 hearing within the United States.
12 (2) FAILURE TO OBEY A SUBPOENA.—If a per-
13 son refuses to obey a subpoena issued under para-
14 graph (1), the Commission may apply to a United
15 States district court for an order requiring that per-
16 son to appear before the Commission to give testi-
17 mony, produce evidence, or both, relating to the
18 matter under investigation. The application may be
19 made within the judicial district where the hearing
20 is conducted or where that person is found, resides,
21 or transacts business. Any failure to obey the order
22 of the court may be punished by the court as civil
23 contempt.
24 (3) SERVICE OF SUBPOENAS.—The subpoenas
25 of the Commission shall be served in the manner

1 provided for subpoenas issued by a United States
2 district court under the Federal Rules of Civil Pro-
3 cedure for the United States district courts.
4 (4) SERVICE OF PROCESS.—All process of any
5 court to which application is made under paragraph
6 (2) may be served in the judicial district in which
7 the person required to be served resides or may be
8 found.
9 (p) FEDERAL ADVISORY COMMITTEE ACT.—Section
10 14 of the Federal Advisory Committee Act (5 U.S.C.
11 App.) shall not apply to the Commission.
12 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**
13 There are authorized to be appropriated to the Sec-
14 retary of Energy—
15 (1) for the period encompassing fiscal years
16 2010 through 2019—
17 (A) $500,000,000 for awarding the prize
18 under section 6 for meeting the goal described
19 in section 3(1);
20 (B) $250,000,000 for awarding the prize
21 under section 6 for meeting the goal described
22 in section 3(2);
23 (C) $250,000,000 for awarding the prize
24 under section 6 for meeting the goal described
25 in section 3(3);

1 (D) $1,000,000,000 for awarding the prize
2 under section 6 for meeting the goal described
3 in section 3(4);
4 (E) $1,000,000,000 for awarding the prize
5 under section 6 for meeting the goal described
6 in section 3(5);
7 (F) $1,000,000,000 for awarding the prize
8 under section 6 for meeting the goal described
9 in section 3(6);
10 (G) $10,000,000,000 for awarding the
11 prize under section 6 for meeting the goal de-
12 scribed in section 3(7); and
13 (H) $10,000,000,000 for carrying out the
14 grant program under section 5; and
15 (2) such sums as may be necessary for carrying
16 out this Act for subsequent fiscal years.