114TH CONGRESS
1ST SESSION

H. R. 2244

To establish a Strategic Transformer Reserve program, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 8, 2015

Mrs. Ellmers of North Carolina (for herself and Mr. McNerney) introduced the following bill; which was referred to the Committee on Energy and Commerce

A BILL

To establish a Strategic Transformer Reserve program, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. STRATEGIC TRANSFORMER RESERVE PROGRAM.

(a) FINDING.—Congress finds that the storage of strategically located spare large power transformers will diminish the vulnerability of the United States to multiple risks facing electric grid reliability, including physical attack, cyber attack, electromagnetic pulse, geomagnetic disturbances, severe weather, and seismic events.
(b) Definitions.—In this section:

(1) Bulk-power system.—The term "bulk-power system" has the meaning given such term in section 215(a) of the Federal Power Act (16 U.S.C. 824o(a)).

(2) Critically damaged large power transformer.—The term "critically damaged large power transformer" means a large power transformer that—

(A) has sustained extensive damage such that—

(i) repair or refurbishment is not economically viable; or

(ii) the extensive time to repair or refurbish the large power transformer would create an extended period of instability in the bulk-power system; and

(B) prior to sustaining such damage was part of the bulk-power system.

(3) Large power transformer.—The term "large power transformer" means a power transformer, including related critical equipment, that is, or is intended to be, a part of the bulk-power system, with a maximum nameplate rating of 100 megavolt-amperes or higher.
(4) Secretary.—The term “Secretary” means the Secretary of Energy.

(5) Spare Large Power Transformer.—The term “spare large power transformer” means a large power transformer that is stored within the Strategic Transformer Reserve to be available to temporarily replace a critically damaged large power transformer.

(e) Strategic Transformer Reserve Plan.—

(1) Plan.—Not later than one year after the date of enactment of this Act, the Secretary, acting through the Office of Electricity Delivery and Energy Reliability, shall prepare and submit to Congress for approval a plan to establish a Strategic Transformer Reserve for the storage, in strategically located facilities, of spare large power transformers in sufficient numbers to temporarily replace critically damaged large power transformers.

(2) Inclusions.—The Strategic Transformer Reserve plan shall include a description of—

(A) the appropriate number of spare large power transformers and total capacity in megawatts necessary in the Strategic Transformer Reserve to provide or restore sufficient resiliency to the bulk-power system to mitigate
significant impacts to the electric grid resulting from—

(i) physical attack;

(ii) cyber attack;

(iii) electromagnetic pulse attack;

(iv) geomagnetic disturbances;

(v) severe weather; or

(vi) seismic events;

(B) the potential locations for, and feasibility and appropriate number of, strategic storage locations, including consideration of—

(i) the physical security of such locations;

(ii) the protection of the confidentiality of such locations; and

(iii) the proximity of such locations to sites of potentially critically damaged large power transformers, so as to enable efficient delivery of spare large power transformers to such sites;

(C) the degree of flexibility of spare large power transformers in the Strategic Transformer Reserve to conform to different substation configurations, including consideration of transformer—
(i) power and voltage rating for each winding;

(ii) overload requirements;

(iii) impedance between windings;

(iv) configuration of windings; and

(v) tap requirements;

(D) an estimate of the direct cost of the Strategic Transformer Reserve, as proposed, including—

(i) the cost of storage facilities for the spare large power transformers;

(ii) the cost of the spare large power transformers; and

(iii) management, maintenance, and operation costs;

(E) the funding options available to establish, stock, manage, and maintain the Strategic Transformer Reserve, including consideration of public-private cost-sharing options;

(F) the ease and speed of transportation, installation, and energization of spare large power transformers, including consideration of factors such as—

(i) transformer transportation weight;

(ii) transformer size;
(iii) topology of critical substations;

(iv) availability of appropriate transformer mounting pads;

(v) flexibility of the spare large power transformers as described in subparagraph (C); and

(vi) ability to rapidly transition a spare large power transformer from storage to energization;

(G) eligibility criteria for withdrawal of spare large power transformers from the Strategic Transformer Reserve to replace critically damaged large power transformers, including consideration of related existing industry programs;

(H) the process by which owners of critically damaged large power transformers may apply for a withdrawal from the Strategic Transformer Reserve;

(I) the process by which spare large power transformers withdrawn from the Strategic Transformer Reserve are returned to the Strategic Transformer Reserve;

(J) any cost-share or rental fees determined appropriate for restocking returned spare
large power transformers to the Strategic Transformer Reserve to be paid by owners of critically damaged large power transformers that have withdrawn such spare large power transformers; and

(K) other considerations for designing, constructing, stocking, and managing the Strategic Transformer Reserve.

(d) CONGRESSIONAL APPROVAL OF STRATEGIC TRANSFORMER RESERVE PLAN.—The Secretary may not establish a Strategic Transformer Reserve until Congress has approved the plan submitted pursuant to subsection (c).

(e) RESTRICTION.—No funds may be used by the Secretary to establish a Strategic Transformer Reserve without prior Congressional approval of the plan submitted pursuant to subsection (c).