

Calendar No. 457

114TH CONGRESS
2D SESSION**S. 1846****[Report No. 114–250]**

To amend the Homeland Security Act of 2002 to secure critical infrastructure against electromagnetic threats, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 23, 2015

Mr. JOHNSON (for himself and Mr. CRUZ) introduced the following bill; which was read twice and referred to the Committee on Homeland Security and Governmental Affairs

MAY 9, 2016

Reported by Mr. JOHNSON, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

A BILL

To amend the Homeland Security Act of 2002 to secure critical infrastructure against electromagnetic threats, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Critical Infrastructure
5 Protection Act of 2015” or “CIPA”.

1 **SEC. 2. EMP PLANNING, RESEARCH AND DEVELOPMENT,**
 2 **AND PROTECTION AND PREPAREDNESS.**

3 (a) **IN GENERAL.**—The Homeland Security Act of
 4 2002 (6 U.S.C. 101 et seq.) is amended—

5 (1) in section 2 (6 U.S.C. 101)—

6 (A) by redesignating paragraphs (7)
 7 through (18) as paragraphs (8) through (19),
 8 respectively; and

9 (B) by inserting after paragraph (6) the
 10 following:

11 “(7) **EM THREAT.**—The term ‘EM threat’
 12 means an electromagnetic pulse caused by—

13 “(A) a nuclear device or nonnuclear device;
 14 including such a pulse caused by an act of ter-
 15 rorism; or

16 “(B) a geomagnetic disturbance caused by
 17 solar storms or other naturally occurring phe-
 18 nomena.”;

19 (2) in section 201(d) (6 U.S.C. 121(d)), by
 20 adding at the end the following:

21 “(26)(A) Prepare and submit to the Committee
 22 on Homeland Security and Governmental Affairs of
 23 the Senate and the Committee on Homeland Secu-
 24 rity of the House of Representatives—

25 “(i) a recommended strategy to protect
 26 and prepare the critical infrastructure of the

1 American homeland against EM threats, includ-
2 ing from acts of terrorism; and

3 “(ii) not less frequently than every 2 years;
4 updates of the recommended strategy.

5 “(B) The recommended strategy under sub-
6 paragraph (A) shall—

7 “(i) be based on findings of the research
8 and development conducted under section 318;

9 “(ii) be developed in consultation with the
10 relevant Federal sector-specific agencies (as de-
11 fined under Homeland Security Presidential Di-
12 rective 7) for critical infrastructures;

13 “(iii) be developed in consultation with the
14 relevant sector coordinating councils for critical
15 infrastructures; and

16 “(iv) be submitted in unclassified form; but
17 may include a classified annex.

18 “(C) The Secretary may, if appropriate, incor-
19 porate the recommended strategy into a broader rec-
20 ommendation developed by the Department to help
21 protect and prepare critical infrastructure from ter-
22 rorism and other threats if, as incorporated, the rec-
23 ommended strategy complies with subparagraph
24 (B).”;

1 (3) in title III (6 U.S.C. 181 et seq.), by adding
2 at the end the following:

3 **“SEC. 318. EM THREAT RESEARCH AND DEVELOPMENT.**

4 “(a) IN GENERAL.—In furtherance of domestic pre-
5 paredness and response, the Secretary, acting through the
6 Under Secretary for Science and Technology, and in con-
7 sultation with other relevant executive agencies and rel-
8 evant owners and operators of critical infrastructure,
9 shall, to the extent practicable, conduct research and de-
10 velopment to mitigate the consequences of EM threats.

11 “(b) SCOPE.—The scope of the research and develop-
12 ment under subsection (a) shall include the following:

13 “(1) An objective scientific analysis of the risks
14 to critical infrastructures from a range of EM
15 threats.

16 “(2) Determination of the critical national secu-
17 rity assets and vital civic utilities and infrastructures
18 that are at risk from EM threats.

19 “(3) An evaluation of emergency planning and
20 response technologies that would address the find-
21 ings and recommendations of experts, including
22 those of the Commission to Assess the Threat to the
23 United States from Electromagnetic Pulse Attack,
24 which shall include a review of the feasibility of—

1 “(A) rapidly isolating one or more portions
2 of the electrical grid from the main electrical
3 grid; and

4 “(B) training utility and transmission op-
5 erators to deactivate transmission lines within
6 seconds of an event constituting an EM threat.

7 “(4) An analysis of technology options that are
8 available to improve the resiliency of critical infra-
9 structure to EM threats, which shall include an
10 analysis of neutral current blocking devices that may
11 protect high-voltage transmission lines.

12 “(5) The restoration and recovery capabilities
13 of critical infrastructure under differing levels of
14 damage and disruption from various EM threats.

15 “(6) An analysis of the feasibility of a real-time
16 alert system to inform electric grid operators and
17 other stakeholders within milliseconds of a high-alti-
18 tude nuclear explosion.”; and

19 (4) in title V (6 U.S.C. 311 et seq.), by adding
20 at the end the following:

21 **“SEC. 526. NATIONAL PLANNING FRAMEWORKS AND EDU-**
22 **CATION.**

23 “The Secretary, acting through the Under Secretary
24 for the National Protection and Programs Directorate,
25 shall, to the extent practicable—

1 “(1) include EM threats in national planning
2 frameworks; and

3 ~~“(2) conduct outreach to educate owners and~~
4 ~~operators of critical infrastructure; emergency plan-~~
5 ~~ners; and emergency response providers at all levels~~
6 ~~of government regarding EM threats.”.~~

7 (b) TECHNICAL AND CONFORMING AMENDMENTS.—

8 (1) The table of contents in section 1(b) of the
9 Homeland Security Act of 2002 is amended—

10 (A) by inserting after the item relating to
11 section 317 the following:

“Sec. 318. EMP research and development.”;

12 and

13 (B) by inserting after the item relating to
14 section 525 the following:

“Sec. 526. National planning frameworks and education.”.

15 (2) Section 501(13) of the Homeland Security
16 Act of 2002 (6 U.S.C. 311(13)) is amended by strik-
17 ing “section 101(11)(B)” and inserting “section
18 101(12)(B)”.

19 (3) Section 712(a) of title 14, United States
20 Code, is amended by striking “section 2(16) of the
21 Homeland Security Act of 2002 (6 U.S.C. 101(16))”
22 and inserting “section 2 of the Homeland Security
23 Act of 2002 (6 U.S.C. 101)”.

1 ~~(c) DEADLINE FOR INITIAL RECOMMENDED STRAT-~~
 2 ~~EGY.—Not later than 1 year after the date of enactment~~
 3 ~~of this Act, the Secretary of Homeland Security shall sub-~~
 4 ~~mit the recommended strategy required under paragraph~~
 5 ~~(26) of section 201(d) of the Homeland Security Act of~~
 6 ~~2002 (6 U.S.C. 121(d)), as added by this Act.~~

7 ~~(d) REPORT.—Not later than 180 days after the date~~
 8 ~~of enactment of this Act, the Secretary of Homeland Secu-~~
 9 ~~rity shall submit to Congress a report describing the~~
 10 ~~progress made in, and an estimated date by which the De-~~
 11 ~~partment of Homeland Security will have completed—~~

12 ~~(1) including EM threats (as defined in section~~
 13 ~~2 of the Homeland Security Act of 2002, as amend-~~
 14 ~~ed by this Act) in national planning frameworks;~~

15 ~~(2) research and development described in sec-~~
 16 ~~tion 318 of the Homeland Security Act of 2002, as~~
 17 ~~added by this Act;~~

18 ~~(3) development of the recommended strategy~~
 19 ~~required under paragraph (26) of section 201(d) of~~
 20 ~~the Homeland Security Act of 2002 (6 U.S.C.~~
 21 ~~121(d)), as added by this Act; and~~

22 ~~(4) beginning to conduct outreach to educate~~
 23 ~~emergency planners and emergency response pro-~~
 24 ~~viders at all levels of government regarding EM~~
 25 ~~threat events.~~

1 **SEC. 3. NO REGULATORY AUTHORITY.**

2 Nothing in this Act, including the amendments made
3 by this Act, shall be construed to grant any regulatory
4 authority.

5 **SEC. 4. NO NEW AUTHORIZATION OF APPROPRIATIONS.**

6 This Act, including the amendments made by this
7 Act, may be carried out only by using funds appropriated
8 under the authority of other laws.

9 **SECTION 1. SHORT TITLE.**

10 *This Act may be cited as the “Critical Infrastructure*
11 *Protection Act of 2016” or the “CIPA”.*

12 **SEC. 2. EMP AND GMD PLANNING, RESEARCH AND DEVEL-**
13 **OPMENT, AND PROTECTION AND PREPARED-**
14 **NESS.**

15 (a) *IN GENERAL.*—*The Homeland Security Act of*
16 *2002 (6 U.S.C. 101 et seq.) is amended—*

17 *(1) in section 2 (6 U.S.C. 101)—*

18 *(A) by redesignating paragraphs (9)*
19 *through (18) as paragraphs (11) through (20),*
20 *respectively;*

21 *(B) by redesignating paragraphs (7) and*
22 *(8) as paragraphs (8) and (9), respectively;*

23 *(C) by inserting after paragraph (6) the fol-*
24 *lowing:*

25 *“(7) The term ‘EMP’ means an electromagnetic*
26 *pulse caused by a nuclear device or nonnuclear device,*

1 *including such a pulse caused by an act of ter-*
 2 *rorism.”; and*

3 *(D) by inserting after paragraph (9), as so*
 4 *redesignated, the following:*

5 *“(10) The term ‘GMD’ means a geomagnetic dis-*
 6 *turbance caused by a solar storm or another naturally*
 7 *occurring phenomenon.”;*

8 *(2) in section 201(d) (6 U.S.C. 121(d)), by add-*
 9 *ing at the end the following:*

10 *“(26)(A) To conduct an intelligence-based review*
 11 *and comparison of the risk and consequence of threats*
 12 *and hazards, including GMD and EMP, facing crit-*
 13 *ical infrastructures, and prepare and submit to the*
 14 *Committee on Homeland Security and Governmental*
 15 *Affairs of the Senate and the Committee on Home-*
 16 *land Security of the House of Representatives—*

17 *“(i) a recommended strategy to protect and*
 18 *prepare the critical infrastructure of the Amer-*
 19 *ican homeland against threats of EMP and*
 20 *GMD, including from acts of terrorism; and*

21 *“(ii) not less frequently than every 2 years,*
 22 *updates of the recommended strategy.*

23 *“(B) The recommended strategy under subpara-*
 24 *graph (A) shall—*

1 “(i) be based on findings of the research and
2 development conducted under section 319;

3 “(ii) be developed in consultation with the
4 relevant Federal sector-specific agencies (as de-
5 fined under Presidential Policy Directive–21) for
6 critical infrastructures;

7 “(iii) be developed in consultation with the
8 relevant sector coordinating councils for critical
9 infrastructures;

10 “(iv) be informed, to the extent practicable,
11 by the findings of the intelligence-based review
12 and comparison of the risk and consequence of
13 threats and hazards, including GMD and EMP,
14 facing critical infrastructures conducted under
15 subparagraph (A); and

16 “(v) be submitted in unclassified form, but
17 may include a classified annex.

18 “(C) The Secretary may, if appropriate, incor-
19 porate the recommended strategy into a broader rec-
20 ommendation developed by the Department to help
21 protect and prepare critical infrastructure from ter-
22 rorism, cyber attacks, and other threats and hazards
23 if, as incorporated, the recommended strategy com-
24 plies with subparagraph (B).”;

1 (3) *in title III (6 U.S.C. 181 et seq.), by adding*
 2 *at the end the following:*

3 **“SEC. 319. GMD AND EMP MITIGATION RESEARCH AND DE-**
 4 **VELOPMENT.**

5 “(a) *IN GENERAL.*—*In furtherance of domestic pre-*
 6 *paredness and response, the Secretary, acting through the*
 7 *Under Secretary for Science and Technology, and in con-*
 8 *sultation with other relevant executive agencies and relevant*
 9 *owners and operators of critical infrastructure, shall, to the*
 10 *extent practicable, conduct research and development to*
 11 *mitigate the consequences of threats of EMP and GMD.*

12 “(b) *SCOPE.*—*The scope of the research and develop-*
 13 *ment under subsection (a) shall include the following:*

14 “(1) *An objective scientific analysis—*

15 “(A) *evaluating the risks to critical infra-*
 16 *structures from a range of threats of EMP and*
 17 *GMD; and*

18 “(B) *which shall—*

19 “(i) *be conducted in conjunction with*
 20 *the Office of Intelligence and Analysis; and*

21 “(ii) *include a review and comparison*
 22 *of the range of threats and hazards facing*
 23 *critical infrastructure of the electric grid.*

1 “(2) *Determination of the critical utilities and*
2 *national security assets and infrastructures that are*
3 *at risk from threats of EMP and GMD.*

4 “(3) *An evaluation of emergency planning and*
5 *response technologies that would address the findings*
6 *and recommendations of experts, including those of*
7 *the Commission to Assess the Threat to the United*
8 *States from Electromagnetic Pulse Attack, which shall*
9 *include a review of the feasibility of—*

10 “(A) *rapidly isolating 1 or more portions of*
11 *the electrical grid from the main electrical grid;*
12 *and*

13 “(B) *training utility and transmission op-*
14 *erators to deactivate transmission lines within*
15 *seconds of an event constituting a threat of EMP*
16 *or GMD.*

17 “(4) *An analysis of technology options that are*
18 *available to improve the resiliency of critical infra-*
19 *structure to threats of EMP and GMD, which shall*
20 *include an analysis of neutral current blocking de-*
21 *VICES that may protect high-voltage transmission*
22 *lines.*

23 “(5) *The restoration and recovery capabilities of*
24 *critical infrastructure under differing levels of dam-*
25 *age and disruption from various threats of EMP and*

1 *GMD, as informed by the objective scientific analysis*
 2 *conducted under paragraph (1).*

3 “(6) *An analysis of the feasibility of a real-time*
 4 *alert system to inform electric grid operators and*
 5 *other stakeholders within milliseconds of a high-alti-*
 6 *tude nuclear explosion.”; and*

7 (4) *in title V (6 U.S.C. 311 et seq.), by adding*
 8 *at the end the following:*

9 **“SEC. 527. NATIONAL PLANNING AND EDUCATION.**

10 “(a) *IN GENERAL.—The Secretary shall, to the extent*
 11 *practicable—*

12 “(1) *develop an incident annex or similar re-*
 13 *sponse and planning strategy that guides the response*
 14 *to a major GMD or EMP event; and*

15 “(2) *conduct outreach to educate owners and op-*
 16 *erators of critical infrastructure, emergency planners,*
 17 *and emergency response providers at all levels of gov-*
 18 *ernment regarding threats of EMP and GMD.*

19 “(b) *EXISTING ANNEXES AND PLANS.—The incident*
 20 *annex or response and planning strategy developed under*
 21 *subsection (a)(1) may be incorporated into existing incident*
 22 *annexes or response plans.”.*

23 (b) *TECHNICAL AND CONFORMING AMENDMENTS.—*

24 (1) *The table of contents in section 1(b) of the*
 25 *Homeland Security Act of 2002 is amended—*

1 (A) by inserting after the item relating to
2 section 317 the following:

“Sec. 319. GMD and EMP mitigation research and development.”; and

3 (B) by inserting after the item relating to
4 section 525 the following:

“Sec. 526. Integrated Public Alert and Warning System modernization.

“Sec. 527. National planning and education.”.

5 (2) Section 501(13) of the Homeland Security
6 Act of 2002 (6 U.S.C. 311(13)) is amended by strik-
7 ing “section 2(11)(B)” and inserting “section
8 2(13)(B)”.

9 (3) Section 712(a) of title 14, United States
10 Code, is amended by striking “section 2(16) of the
11 Homeland Security Act of 2002 (6 U.S.C. 101(16))”
12 and inserting “section 2 of the Homeland Security
13 Act of 2002 (6 U.S.C. 101)”.

14 (c) *DEADLINE FOR INITIAL RECOMMENDED STRAT-*
15 *EGY.*—Not later than 1 year after the date of enactment
16 of this Act, the Secretary of Homeland Security shall sub-
17 mit the recommended strategy required under paragraph
18 (26) of section 201(d) of the Homeland Security Act of 2002
19 (6 U.S.C. 121(d)), as added by this Act.

20 (d) *REPORT.*—Not later than 180 days after the date
21 of enactment of this Act, the Secretary of Homeland Secu-
22 rity shall submit to Congress a report describing the

1 progress made in, and an estimated date by which the De-
 2 partment of Homeland Security will have completed—

3 (1) including threats of EMP and GMD (as
 4 those terms are defined in section 2 of the Homeland
 5 Security Act of 2002, as amended by this Act) in na-
 6 tional planning, as described in section 527 of the
 7 Homeland Security Act of 2002, as added by this Act;

8 (2) research and development described in section
 9 319 of the Homeland Security Act of 2002, as added
 10 by this Act;

11 (3) development of the recommended strategy re-
 12 quired under paragraph (26) of section 201(d) of the
 13 Homeland Security Act of 2002 (6 U.S.C. 121(d)), as
 14 added by this Act; and

15 (4) beginning to conduct outreach to educate
 16 emergency planners and emergency response providers
 17 at all levels of government regarding threats of EMP
 18 and GMD events.

19 **SEC. 3. NO REGULATORY AUTHORITY.**

20 Nothing in this Act, including the amendments made
 21 by this Act, shall be construed to grant any regulatory au-
 22 thority.

1 **SEC. 4. NO NEW AUTHORIZATION OF APPROPRIATIONS.**

2 *This Act, including the amendments made by this Act,*
3 *may be carried out only by using funds appropriated under*
4 *the authority of other laws.*

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[Report No. 114-250]

A BILL

To amend the Homeland Security Act of 2002 to secure critical infrastructure against electro-magnetic threats, and for other purposes.

MAY 9, 2016

Reported with an amendment