

**[DISCUSSION DRAFT]**

SEPTEMBER 9, 2016

114TH CONGRESS  
2D SESSION**H. R.** \_\_\_\_\_

To direct the Secretary of Homeland Security to conduct research and development to mitigate the consequences of threats to voting systems, to amend the Help America Vote Act of 2002 to require the voting systems used in elections for Federal office to comply with national standards established by the Election Assistance Commission and the National Institute of Standards and Technology for operational security and ballot verification, to establish programs to promote research in innovative voting system technologies, and for other purposes.

---

**IN THE HOUSE OF REPRESENTATIVES**

Mr. JOHNSON of Georgia introduced the following bill; which was referred to the Committee on \_\_\_\_\_

---

**A BILL**

To direct the Secretary of Homeland Security to conduct research and development to mitigate the consequences of threats to voting systems, to amend the Help America Vote Act of 2002 to require the voting systems used in elections for Federal office to comply with national standards established by the Election Assistance Commission and the National Institute of Standards and Technology for operational security and ballot verification, to establish programs to promote research

in innovative voting system technologies, 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; TABLE OF CONTENTS.**

4       (a) **SHORT TITLE.**—This Act may be cited as the  
5 “Election Infrastructure and Security Promotion Act of  
6 2016”.

7       (b) **TABLE OF CONTENTS.**—The table of contents of  
8 this Act is as follows:

Sec. 1. Short title; table of contents.

**TITLE I—ELECTION INFRASTRUCTURE AND SECURITY**

Sec. 101. Definition of critical infrastructure.

Sec. 102. Designation of voting systems as critical infrastructure.

Sec. 103. Voting system threat and research and development.

**TITLE II—NATIONAL STANDARDS FOR VOTING SYSTEM  
SECURITY**

Sec. 201. Development of standards.

Sec. 202. Requiring States to comply with standards in administration of elec-  
tions for Federal office.

Sec. 203. Incorporation of standards into certification and testing of voting sys-  
tems.

**TITLE III—NATIONAL STANDARDS FOR TRANSPARENCY AND  
VERIFICATION OF BALLOT COUNTING**

Sec. 301. Development of standards.

Sec. 302. Requiring States to comply with standards in administration of elec-  
tions for Federal office.

**TITLE IV—RESEARCH AND DEVELOPMENT**

Sec. 401. Innovative election technology research and development.

1 **TITLE I—ELECTION INFRA-**  
2 **STRUCTURE AND SECURITY**

3 **SEC. 101. DEFINITION OF CRITICAL INFRASTRUCTURE.**

4 In this title, the term “critical infrastructure” has the  
5 meaning given such term in section 1016 of the Critical  
6 Infrastructure Protection Act of 2001 (42 U.S.C.  
7 5195c(e)).

8 **SEC. 102. DESIGNATION OF VOTING SYSTEMS AS CRITICAL**  
9 **INFRASTRUCTURE.**

10 The Secretary of Homeland Security, acting through  
11 the Assistant Secretary of the National Protection and  
12 Programs Directorate, shall—

13 (1) designate voting systems used in the United  
14 States as critical infrastructure;

15 (2) include threats of compromise, disruption,  
16 or destruction of voting systems in national planning  
17 scenarios; and

18 (3) conduct a campaign to proactively educate  
19 local election officials about the designation of voting  
20 systems as critical infrastructure and election offi-  
21 cials at all levels of government of voting system  
22 threats.

1 **SEC. 103. VOTING SYSTEM THREAT AND RESEARCH AND**  
2 **DEVELOPMENT.**

3 (a) IN GENERAL.—In furtherance of local election of-  
4 ficial preparedness and response, the Secretary of Home-  
5 land Security, acting through the Under Secretary for  
6 Science and Technology, and in consultation with other  
7 relevant agencies and departments of the Federal Govern-  
8 ment and relevant State and local election official opera-  
9 tors of election infrastructure, shall conduct research and  
10 development to mitigate the consequences of voting sys-  
11 tems threats.

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 of the risks  
15 to critical election infrastructures from a range of  
16 threats.

17 (2) Determination of the voting system assets  
18 and infrastructures that are at risk from intrusion,  
19 compromise, disruption or destruction.

20 (3) An evaluation of emergency planning and  
21 response technologies that would address the find-  
22 ings and recommendations of experts, including  
23 those of a Commission to Assess the Threat to the  
24 United States from election administration or voting  
25 system attack.

1           (4) An analysis of technology options that are  
2 available to improve the resiliency of critical infra-  
3 structure to voting system threats.

4           (5) The restoration and recovery capabilities of  
5 critical infrastructure under differing levels of dam-  
6 age and disruption.

7 (c) COMPREHENSIVE PLAN.—

8           (1) IN GENERAL.—The Secretary of Homeland  
9 Security shall prepare and submit to the Committee  
10 on Homeland Security of the House of Representa-  
11 tives and the Committee on Homeland Security and  
12 Governmental Affairs of the Senate a comprehensive  
13 plan to protect and prepare the critical infrastruc-  
14 ture of the voting systems used in the United States  
15 against threats, including from acts of terrorism.

16           (2) PLAN REQUIREMENTS.—The comprehensive  
17 plan shall—

18                   (A) be based on findings of the research  
19 and development conducted under subsection  
20 (a);

21                   (B) be developed in consultation with the  
22 relevant Federal sector-specific agencies (as de-  
23 fined under Homeland Security Presidential Di-  
24 rective for critical infrastructures); and

1 (C) be developed in consultation with State  
2 and local election officials.

3 (3) UPDATES.—The Secretary shall update the  
4 plan required under this subsection biennially.

5 **TITLE II—NATIONAL STAND-**  
6 **ARDS FOR VOTING SYSTEM**  
7 **SECURITY**

8 **SEC. 201. DEVELOPMENT OF STANDARDS.**

9 (a) DEVELOPMENT.—The Election Assistance Com-  
10 mission and the Director of the National Institute of  
11 Standards and Technology shall jointly develop standards  
12 for ensuring the operational security of the voting systems  
13 used in elections for Federal office, including the physical  
14 and cybersecurity of such systems and security require-  
15 ments for the personnel who operate such systems.

16 (b) CONTENTS OF STANDARDS.—In developing  
17 standards under this title, the Commission and the Direc-  
18 tor shall ensure the following:

19 (1) The standards shall set forth specific, evi-  
20 dence-based security requirements for the operation  
21 of each individual component of voting systems, in-  
22 cluding components for marking ballots, scanning  
23 ballots, aggregating vote tallies from vote counters,  
24 and electronic poll books.

1           (2) The standards shall set forth specific, evi-  
2           dence-based requirements for the interoperability of  
3           the components, based on data standards established  
4           by the National Institute of Standards and Tech-  
5           nology.

6           (3) No system or device upon which ballots or  
7           votes are cast or tabulated shall be connected to the  
8           Internet at any time through any publicly accessible  
9           network.

10          (4) No system or device upon which ballots or  
11          votes are cast or tabulated shall contain, use, or be  
12          accessible by any wireless, power-line, or concealed  
13          communication device.

14          (c) DEADLINE; UPDATES.—

15           (1) DEADLINE FOR INITIAL STANDARDS.—The  
16          Commission and the Director shall develop the  
17          standards under this title not later than 1 year after  
18          the date of the enactment of this Act.

19           (2) UPDATES.—The Commission and the Direc-  
20          tor may update the standards under this title at  
21          such times as the Commission and Director consider  
22          appropriate.

1 **SEC. 202. REQUIRING STATES TO COMPLY WITH STAND-**  
2 **ARDS IN ADMINISTRATION OF ELECTIONS**  
3 **FOR FEDERAL OFFICE.**

4 Section 301(a) of the Help America Vote Act of 2002  
5 (52 U.S.C. 21081(a)) is amended by adding at the end  
6 the following new paragraph:

7 “(7) COMPLIANCE WITH SECURITY STAND-  
8 ARDS.—In operating the voting system, the State  
9 shall comply with the applicable standards developed  
10 by the Commission and the Director of the National  
11 Institute of Standards and Technology under title II  
12 of the Election Infrastructure and Security Pro-  
13 motion Act of 2016 for ensuring the operational se-  
14 curity of voting systems.”.

15 **SEC. 203. INCORPORATION OF STANDARDS INTO CERTIFI-**  
16 **CATION AND TESTING OF VOTING SYSTEMS.**

17 Section 231(a) of the Help America Vote Act of 2002  
18 (52 U.S.C. 20971(a)) is amended by adding at the end  
19 the following new paragraph:

20 “(3) ENSURING COMPLIANCE WITH OPER-  
21 ATIONAL SECURITY STANDARDS.—The testing and  
22 certification of voting system hardware and software  
23 carried out under this subtitle shall test whether vot-  
24 ing systems are in compliance with the applicable  
25 standards developed by the Commission and the Di-  
26 rector of the National Institute of Standards and

1 Technology under title II of the Election Infrastruc-  
2 ture and Security Promotion Act of 2016 for ensur-  
3 ing the operational security of voting systems, in-  
4 cluding testing whether the components of voting  
5 systems meet the component-specific security re-  
6 quirements and the system interoperability require-  
7 ments under such standards.”.

8 **TITLE III—NATIONAL STAND-**  
9 **ARDS FOR TRANSPARENCY**  
10 **AND VERIFICATION OF BAL-**  
11 **LOT COUNTING**

12 **SEC. 301. DEVELOPMENT OF STANDARDS.**

13 (a) DEVELOPMENT.—The Election Assistance Com-  
14 mission and the Director of the National Institute of  
15 Standards and Technology shall jointly develop standards  
16 for ensuring that the process by which ballots are counted  
17 in elections for Federal office is transparent and permits  
18 voters to verify that votes in such elections are counted  
19 correctly.

20 (b) CONTENTS OF STANDARDS.—In developing  
21 standards under this title, the Commission and the Direc-  
22 tor shall ensure the following:

23 (1) Election officials will provide the public with  
24 sufficient evidence to verify the results of an election  
25 for Federal office, including through the establish-

1       ment of tracking procedures that permit members of  
2       the public to track the ballots counted in the elec-  
3       tion, so long as such procedures ensure the anonym-  
4       ity of the individuals who cast the ballots.

5           (2) All of the data used or produced by the rel-  
6       evant components of a voting system used in an elec-  
7       tion for Federal office.

8           (3) Election officials shall make all of the rel-  
9       evant components of a voting system used in an elec-  
10      tion for Federal office available to other parties  
11      (such as other officials of the State, research organi-  
12      zations, and institutions of higher education) to du-  
13      plicate the testing procedures used to certify the use  
14      of the system for use in such elections.

15      (c) DEADLINE; UPDATES.—

16           (1) DEADLINE FOR INITIAL STANDARDS.—The  
17      Commission and the Director shall develop the  
18      standards under this title not later than 1 year after  
19      the date of the enactment of this Act.

20           (2) UPDATES.—The Commission and the Direc-  
21      tor may update the standards under this title at  
22      such times as the Commission and Director consider  
23      appropriate.

24      (d) RELEVANT COMPONENTS DEFINED.—In this sec-  
25      tion, the term “relevant components” means, with respect

1 to a voting system, each component of the system which  
2 is involved with counting ballots and producing a tally of  
3 the ballots cast, including the source code, build tools,  
4 build procedure documentation, test plans, test fixtures,  
5 and software and hardware specifications.

6 **SEC. 302. REQUIRING STATES TO COMPLY WITH STAND-**  
7 **ARDS IN ADMINISTRATION OF ELECTIONS**  
8 **FOR FEDERAL OFFICE.**

9 Section 301(a) of the Help America Vote Act of 2002  
10 (52 U.S.C. 21081(a)), as amended by section 202, is  
11 amended by adding at the end the following new para-  
12 graph:

13 “(8) COMPLIANCE WITH TRANSPARENCY AND  
14 BALLOT VERIFICATION STANDARDS.—In operating  
15 the voting system, the State shall comply with the  
16 applicable standards developed by the Commission  
17 and the Director of the National Institute of Stand-  
18 ards and Technology under title III of the Election  
19 Infrastructure and Security Promotion Act of 2016  
20 for ensuring that the process by which ballots are  
21 counted in elections for Federal office is transparent  
22 and permits voters to verify that votes in such elec-  
23 tions are counted correctly.”.

1           **TITLE IV—RESEARCH AND**  
2                           **DEVELOPMENT**

3   **SEC. 401. INNOVATIVE ELECTION TECHNOLOGY RESEARCH**  
4                           **AND DEVELOPMENT.**

5           (a) IN GENERAL.—The National Science Founda-  
6   tion, in cooperation with the Defense Advanced Research  
7   Projects Agency, shall establish an election technology in-  
8   novation research and development program. Such pro-  
9   gram—

10           (1) shall support the development of hardware  
11   and software technologies and systems for marking  
12   ballots, scanning ballots, aggregating tallies from  
13   counters, and electronic poll books; and

14           (2) may also support research and development  
15   on other elements of technology for voting, election  
16   administration, auditing, and other election-critical  
17   operations.

18           (b) REQUIREMENTS.—The National Science Founda-  
19   tion shall, to the extent practicable and in consultation  
20   with the Election Assistance Commission and the National  
21   Institute of Standards and Technology, ensure that tech-  
22   nologies developed through assistance provided under this  
23   section—

24           (1) conform to any applicable standards and  
25   guidelines for design and for data interoperability

1 established by the Election Assistance Commission  
2 or the National Institute of Standards and Tech-  
3 nology; and

4 (2) are made available for use by Federal,  
5 State, and local governments at no cost.