

113<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 4298

To amend the Federal Power Act to protect the bulk-power system and electric infrastructure critical to the defense of the United States against cybersecurity, physical, and other threats and vulnerabilities.

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## IN THE HOUSE OF REPRESENTATIVES

MARCH 26, 2014

Mr. WAXMAN introduced the following bill; which was referred to the Committee on Energy and Commerce

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## A BILL

To amend the Federal Power Act to protect the bulk-power system and electric infrastructure critical to the defense of the United States against cybersecurity, physical, and other threats and vulnerabilities.

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 “Grid Reliability and  
5       Infrastructure Defense Act” or the “GRID Act”.

6       **SEC. 2. AMENDMENT TO THE FEDERAL POWER ACT.**

7       (a) **CRITICAL ELECTRIC INFRASTRUCTURE SECUR-**  
8       **RITY.**—Part II of the Federal Power Act (16 U.S.C. 824

1 et seq.) is amended by adding after section 215 the fol-  
2 lowing new section:

3 **“SEC. 215A. CRITICAL ELECTRIC INFRASTRUCTURE SECUR-**  
4 **RITY.**

5 “(a) DEFINITIONS.—For purposes of this section:

6 “(1) BULK-POWER SYSTEM; ELECTRIC RELI-  
7 ABILITY ORGANIZATION; REGIONAL ENTITY.—The  
8 terms ‘bulk-power system’, ‘Electric Reliability Or-  
9 ganization’, and ‘regional entity’ have the meanings  
10 given such terms in paragraphs (1), (2), and (7) of  
11 section 215(a), respectively.

12 “(2) DEFENSE CRITICAL ELECTRIC INFRA-  
13 STRUCTURE.—The term ‘defense critical electric in-  
14 frastructure’ means any infrastructure located in the  
15 United States (including the territories) used for the  
16 generation, transmission, or distribution of electric  
17 energy that—

18 “(A) is not part of the bulk-power system;

19 and

20 “(B) serves a facility designated by the  
21 President pursuant to subsection (d)(1), but is  
22 not owned or operated by the owner or operator  
23 of such facility.

24 “(3) DEFENSE CRITICAL ELECTRIC INFRA-  
25 STRUCTURE VULNERABILITY.—The term ‘defense

1 critical electric infrastructure vulnerability’ means a  
2 weakness in defense critical electric infrastructure  
3 that, in the event of—

4 “(A) a malicious act using electronic com-  
5 munication or an electromagnetic pulse, would  
6 pose a substantial risk of disruption of those  
7 electronic devices or communications networks,  
8 including hardware, software, and data, that  
9 are essential to the reliability of defense critical  
10 electric infrastructure; or

11 “(B) a direct physical attack on defense  
12 critical electric infrastructure, would pose a  
13 substantial risk of significant adverse effects on  
14 the reliability of defense critical electric infra-  
15 structure.

16 “(4) ELECTROMAGNETIC PULSE.—The term  
17 ‘electromagnetic pulse’ means 1 or more pulses of  
18 electromagnetic energy, emitted by any device or  
19 weapon capable of generating such a pulse, that  
20 would pose a substantial risk of disruption to the op-  
21 eration of those electronic devices or communications  
22 networks, including hardware, software, and data,  
23 that are essential to the reliability of systems nec-  
24 essary for the generation, transmission, and dis-  
25 tribution of electric energy.

1           “(5) GEOMAGNETIC STORM.—The term ‘geo-  
2           magnetic storm’ means a temporary disturbance of  
3           the Earth’s magnetic field resulting from solar activ-  
4           ity.

5           “(6) GRID SECURITY THREAT.—The term ‘grid  
6           security threat’ means a substantial likelihood of—

7                   “(A)(i) a malicious act using electronic  
8                   communication or an electromagnetic pulse, or  
9                   a geomagnetic storm event, that could disrupt  
10                  the operation of those electronic devices or com-  
11                  munications networks, including hardware, soft-  
12                  ware, and data, that are essential to the reli-  
13                  ability of the bulk-power system or of defense  
14                  critical electric infrastructure; and

15                   “(ii) disruption of the operation of such  
16                   devices or networks, with significant adverse ef-  
17                   fects on the reliability of the bulk-power system  
18                   or of defense critical electric infrastructure, as  
19                   a result of such act or event; or

20                   “(B)(i) a direct physical attack on the  
21                   bulk-power system or on defense critical electric  
22                   infrastructure; and

23                   “(ii) significant adverse effects on the reli-  
24                   ability of the bulk-power system or of defense

1 critical electric infrastructure as a result of  
2 such physical attack.

3 “(7) GRID SECURITY VULNERABILITY.—The  
4 term ‘grid security vulnerability’ means a weakness  
5 in the bulk-power system that, in the event of—

6 “(A) a malicious act using electronic com-  
7 munication or an electromagnetic pulse, would  
8 pose a substantial risk of disruption to the op-  
9 eration of those electronic devices or commu-  
10 nications networks, including hardware, soft-  
11 ware, and data, that are essential to the reli-  
12 ability of the bulk-power system; or

13 “(B) a direct physical attack on the bulk-  
14 power system, would pose a substantial risk of  
15 significant adverse effects on the reliability of  
16 the bulk-power system.

17 “(8) LARGE TRANSFORMER.—The term ‘large  
18 transformer’ means an electric transformer that is  
19 part of the bulk-power system.

20 “(9) PROTECTED INFORMATION.—The term  
21 ‘protected information’ means information, other  
22 than classified national security information, des-  
23 ignated as protected information by the Commission  
24 under subsection (e)(2)—

1           “(A) that was developed or submitted in  
2 connection with the implementation of this sec-  
3 tion;

4           “(B) that specifically discusses grid secu-  
5 rity threats, grid security vulnerabilities, de-  
6 fense critical electric infrastructure  
7 vulnerabilities, or plans, procedures, or meas-  
8 ures to address such threats or vulnerabilities;  
9 and

10           “(C) the unauthorized disclosure of which  
11 could be used in a malicious manner to impair  
12 the reliability of the bulk-power system or of  
13 defense critical electric infrastructure.

14           “(10) SECRETARY.—The term ‘Secretary’  
15 means the Secretary of Energy.

16           “(11) SECURITY.—The definition of ‘security’  
17 in section 3(16) shall not apply to the provisions in  
18 this section.

19           “(b) EMERGENCY RESPONSE MEASURES.—

20           “(1) AUTHORITY TO ADDRESS GRID SECURITY  
21 THREATS.—Whenever the President issues and pro-  
22 vides to the Commission (either directly or through  
23 the Secretary) a written directive or determination  
24 identifying an imminent grid security threat, the  
25 Commission may, with or without notice, hearing, or

1 report, issue such orders for emergency measures as  
2 are necessary in its judgment to protect the reli-  
3 ability of the bulk-power system or of defense critical  
4 electric infrastructure against such threat. As soon  
5 as practicable but not later than 180 days after the  
6 date of enactment of this section, the Commission  
7 shall, after notice and opportunity for comment, es-  
8 tablish rules of procedure that ensure that such au-  
9 thority can be exercised expeditiously.

10 “(2) NOTIFICATION OF CONGRESS.—Whenever  
11 the President issues and provides to the Commission  
12 (either directly or through the Secretary) a written  
13 directive or determination under paragraph (1), the  
14 President (or the Secretary, as the case may be)  
15 shall promptly notify congressional committees of  
16 relevant jurisdiction, including the Committee on  
17 Energy and Commerce of the House of Representa-  
18 tives and the Committee on Energy and Natural Re-  
19 sources of the Senate, of the contents of, and jus-  
20 tification for, such directive or determination.

21 “(3) CONSULTATION.—Before issuing an order  
22 for emergency measures under paragraph (1), the  
23 Commission shall, to the extent practicable in light  
24 of the nature of the grid security threat and the ur-  
25 gency of the need for such emergency measures, con-

1 sult with appropriate governmental authorities in  
2 Canada and Mexico, entities described in paragraph  
3 (4), the Secretary, and other appropriate Federal  
4 agencies regarding implementation of such emer-  
5 gency measures.

6 “(4) APPLICATION.—An order for emergency  
7 measures under this subsection may apply to—

8 “(A) the Electric Reliability Organization;

9 “(B) a regional entity; or

10 “(C) any owner, user, or operator of the  
11 bulk-power system or of defense critical electric  
12 infrastructure within the United States.

13 “(5) DISCONTINUANCE.—The Commission shall  
14 issue an order discontinuing any emergency meas-  
15 ures ordered under this subsection, effective not  
16 later than 30 days after the earliest of the following:

17 “(A) The date upon which the President  
18 issues and provides to the Commission (either  
19 directly or through the Secretary) a written di-  
20 rective or determination that the grid security  
21 threat identified under paragraph (1) no longer  
22 exists.

23 “(B) The date upon which the Commission  
24 issues a written determination that the emer-  
25 gency measures are no longer needed to address



1 the grid security threat identified under para-  
2 graph (1), including by means of Commission  
3 approval of a reliability standard under section  
4 215 that the Commission determines adequately  
5 addresses such threat.

6 “(C) The date that is 1 year after the  
7 issuance of an order under paragraph (1).

8 “(6) COST RECOVERY.—If the Commission de-  
9 termines that owners, operators, or users of the  
10 bulk-power system or of defense critical electric in-  
11 frastructure have incurred substantial costs to com-  
12 ply with an order under this subsection and that  
13 such costs were prudently incurred and cannot rea-  
14 sonably be recovered through regulated rates or  
15 market prices for the electric energy or services sold  
16 by such owners, operators, or users, the Commission  
17 shall, after notice and an opportunity for comment,  
18 establish a mechanism that permits such owners, op-  
19 erators, or users to recover such costs.

20 “(c) MEASURES TO ADDRESS GRID SECURITY  
21 VULNERABILITIES.—

22 “(1) COMMISSION AUTHORITY.—If the Commis-  
23 sion, in consultation with appropriate Federal agen-  
24 cies, identifies a grid security vulnerability that the  
25 Commission determines has not adequately been ad-

1 dressed through a reliability standard developed and  
2 approved under section 215, the Commission shall,  
3 after notice and opportunity for comment and after  
4 consultation with the Secretary, other appropriate  
5 Federal agencies, and appropriate governmental au-  
6 thorities in Canada and Mexico, promulgate a rule  
7 or issue an order requiring implementation, by any  
8 owner, operator, or user of the bulk-power system in  
9 the United States, of measures to protect the bulk-  
10 power system against such vulnerability. Before pro-  
11 mulgating a rule or issuing an order under this  
12 paragraph, the Commission shall, to the extent prac-  
13 ticable in light of the urgency of the need for action  
14 to address the grid security vulnerability, request  
15 and consider recommendations from the Electric Re-  
16 liability Organization regarding such rule or order.  
17 The Commission may establish an appropriate dead-  
18 line for the submission of such recommendations.

19 “(2) CERTAIN EXISTING CYBERSECURITY  
20 VULNERABILITIES.—Not later than 180 days after  
21 the date of enactment of this section, the Commis-  
22 sion shall, after notice and opportunity for comment  
23 and after consultation with the Secretary, other ap-  
24 propriate Federal agencies, and appropriate govern-  
25 mental authorities in Canada and Mexico, promul-

1       gate a rule or issue an order requiring the imple-  
2       mentation, by any owner, user, or operator of the  
3       bulk-power system in the United States, of such  
4       measures as are necessary to protect the bulk-power  
5       system against the vulnerabilities identified in the  
6       June 21, 2007, communication to certain ‘Electricity  
7       Sector Owners and Operators’ from the North  
8       American Electric Reliability Corporation, acting in  
9       its capacity as the Electricity Sector Information  
10      and Analysis Center.

11           “(3) RESCISSION.—The Commission shall ap-  
12      prove a reliability standard developed under section  
13      215 that addresses a grid security vulnerability that  
14      is the subject of a rule or order under paragraph (1)  
15      or (2), unless the Commission determines that such  
16      reliability standard does not adequately protect  
17      against such vulnerability or otherwise does not sat-  
18      isfy the requirements of section 215. Upon such ap-  
19      proval, the Commission shall rescind the rule pro-  
20      mulgated or order issued under paragraph (1) or (2)  
21      addressing such vulnerability, effective upon the ef-  
22      fective date of the newly approved reliability stand-  
23      ard.

24           “(4) LARGE TRANSFORMER AVAILABILITY.—  
25      Not later than 1 year after the date of enactment

1 of this section, the Commission shall, after notice  
2 and an opportunity for comment and after consulta-  
3 tion with the Secretary and other appropriate Fed-  
4 eral agencies, issue an order directing the Electric  
5 Reliability Organization to submit to the Commis-  
6 sion for approval under section 215, not later than  
7 1 year after the issuance of such order, reliability  
8 standards addressing availability of large trans-  
9 formers. Such standards shall require entities that  
10 own or operate large transformers to ensure, individ-  
11 ually or jointly, adequate availability of large trans-  
12 formers to promptly restore the reliable operation of  
13 the bulk-power system in the event that any such  
14 transformer is destroyed or disabled as a result of  
15 a reasonably foreseeable physical or other attack or  
16 geomagnetic storm event. The Commission’s order  
17 shall specify the nature and magnitude of the rea-  
18 sonably foreseeable attacks or events that shall pro-  
19 vide the basis for such standards. Such standards  
20 shall—

21 “(A) provide entities subject to the stand-  
22 ards with the option of meeting such standards  
23 individually or jointly; and

24 “(B) appropriately balance the risks asso-  
25 ciated with a reasonably foreseeable attack or

1 event, including any regional variation in such  
2 risks, and the costs of ensuring adequate avail-  
3 ability of spare transformers.

4 “(d) CRITICAL DEFENSE FACILITIES.—

5 “(1) DESIGNATION.—Not later than 180 days  
6 after the date of enactment of this section, the  
7 President shall designate, in a written directive or  
8 determination provided to the Commission, facilities  
9 located in the United States (including the terri-  
10 tories) that are—

11 “(A) critical to the defense of the United  
12 States; and

13 “(B) vulnerable to a disruption of the sup-  
14 ply of electric energy provided to such facility  
15 by an external provider.

16 The number of facilities designated by such directive  
17 or determination shall not exceed 100. The Presi-  
18 dent may periodically revise the list of designated fa-  
19 cilities through a subsequent written directive or de-  
20 termination provided to the Commission, provided  
21 that the total number of designated facilities at any  
22 time shall not exceed 100.

23 “(2) COMMISSION AUTHORITY.—If the Commis-  
24 sion identifies a defense critical electric infrastruc-  
25 ture vulnerability that the Commission, in consulta-

1       tion with owners and operators of any facility or fa-  
2       cilities designated by the President pursuant to  
3       paragraph (1), determines has not adequately been  
4       addressed through measures undertaken by owners  
5       or operators of defense critical electric infrastruc-  
6       ture, the Commission shall, after notice and an op-  
7       portunity for comment and after consultation with  
8       the Secretary and other appropriate Federal agen-  
9       cies, promulgate a rule or issue an order requiring  
10      implementation, by any owner or operator of defense  
11      critical electric infrastructure, of measures to protect  
12      the defense critical electric infrastructure against  
13      such vulnerability. The Commission shall exempt  
14      from any such rule or order any specific defense  
15      critical electric infrastructure that the Commission  
16      determines already has been adequately protected  
17      against the identified vulnerability. The Commission  
18      shall make any such determination in consultation  
19      with the owner or operator of the facility designated  
20      by the President pursuant to paragraph (1) that re-  
21      lies upon such defense critical electric infrastructure.

22           “(3) COST RECOVERY.—An owner or operator  
23      of defense critical electric infrastructure shall be re-  
24      quired to take measures under paragraph (2) only to  
25      the extent that the owners or operators of a facility

1 or facilities designated by the President pursuant to  
2 paragraph (1) that rely upon such infrastructure  
3 agree to bear the full incremental costs of compli-  
4 ance with a rule promulgated or order issued under  
5 paragraph (2).

6 “(e) PROTECTION OF INFORMATION.—

7 “(1) PROHIBITION OF PUBLIC DISCLOSURE OF  
8 PROTECTED INFORMATION.—Protected informa-  
9 tion—

10 “(A) shall be exempt from disclosure under  
11 section 552(b)(3) of title 5, United States Code;  
12 and

13 “(B) shall not be made available pursuant  
14 to any State, local, or tribal law requiring dis-  
15 closure of information or records.

16 “(2) INFORMATION SHARING.—

17 “(A) IN GENERAL.—Consistent with the  
18 Controlled Unclassified Information framework  
19 established by the President, the Commission  
20 shall promulgate such regulations and issue  
21 such orders as necessary to designate protected  
22 information and to prohibit the unauthorized  
23 disclosure of such protected information.

24 “(B) SHARING OF PROTECTED INFORMA-  
25 TION.—The regulations promulgated and orders

1 issued pursuant to subparagraph (A) shall pro-  
2 vide standards for and facilitate the appropriate  
3 sharing of protected information with, between,  
4 and by Federal, State, local, and tribal authori-  
5 ties, the Electric Reliability Organization, re-  
6 gional entities, and owners, operators, and  
7 users of the bulk-power system in the United  
8 States and of defense critical electric infrastruc-  
9 ture. In promulgating such regulations and  
10 issuing such orders, the Commission shall take  
11 account of the role of State commissions in re-  
12 viewing the prudence and cost of investments  
13 within their respective jurisdictions. The Com-  
14 mission shall consult with appropriate Canadian  
15 and Mexican authorities to develop protocols for  
16 the sharing of protected information with, be-  
17 tween, and by appropriate Canadian and Mexi-  
18 can authorities and owners, operators, and  
19 users of the bulk-power system outside the  
20 United States.

21 “(3) SUBMISSION OF INFORMATION TO CON-  
22 GRESS.—Nothing in this section shall permit or au-  
23 thorize the withholding of information from Con-  
24 gress, any committee or subcommittee thereof, or  
25 the Comptroller General.



1           “(4) DISCLOSURE OF NON-PROTECTED INFOR-  
2           MATION.—In implementing this section, the Com-  
3           mission shall protect from disclosure only the min-  
4           imum amount of information necessary to protect  
5           the reliability of the bulk-power system and of de-  
6           fense critical electric infrastructure. The Commission  
7           shall segregate protected information within docu-  
8           ments and electronic communications, wherever fea-  
9           sible, to facilitate disclosure of information that is  
10          not designated as protected information.

11          “(5) DURATION OF DESIGNATION.—Informa-  
12          tion may not be designated as protected information  
13          for longer than 5 years, unless specifically redesign-  
14          ated by the Commission.

15          “(6) REMOVAL OF DESIGNATION.—The Com-  
16          mission may remove the designation of protected in-  
17          formation, in whole or in part, from a document or  
18          electronic communication if the unauthorized disclo-  
19          sure of such information could no longer be used to  
20          impair the reliability of the bulk-power system or of  
21          defense critical electric infrastructure.

22          “(7) JUDICIAL REVIEW OF DESIGNATIONS.—  
23          Notwithstanding subsection (f) of this section or sec-  
24          tion 313, a person or entity may seek judicial review  
25          of a determination by the Commission concerning

1 the designation of protected information under this  
2 subsection exclusively in the district court of the  
3 United States in the district in which the complain-  
4 ant resides, or has his principal place of business, or  
5 in the District of Columbia. In such a case the court  
6 shall determine the matter de novo, and may exam-  
7 ine the contents of documents or electronic commu-  
8 nications designated as protected information in  
9 camera to determine whether such documents or any  
10 part thereof were improperly designated as protected  
11 information. The burden is on the Commission to  
12 sustain its designation.

13 “(f) JUDICIAL REVIEW.—The Commission shall act  
14 expeditiously to resolve all applications for rehearing of  
15 orders issued pursuant to this section that are filed under  
16 section 313(a). Any party seeking judicial review pursuant  
17 to section 313 of an order issued under this section may  
18 obtain such review only in the United States Court of Ap-  
19 peals for the District of Columbia Circuit.

20 “(g) PROVISION OF ASSISTANCE TO INDUSTRY IN  
21 MEETING GRID SECURITY PROTECTION NEEDS.—

22 “(1) EXPERTISE AND RESOURCES.—The Sec-  
23 retary shall establish a program, in consultation with  
24 other appropriate Federal agencies, to develop tech-  
25 nical expertise in the protection of systems for the

1 generation, transmission, and distribution of electric  
2 energy against geomagnetic storms or malicious acts  
3 using electronic communications or electromagnetic  
4 pulse that would pose a substantial risk of disrup-  
5 tion to the operation of those electronic devices or  
6 communications networks, including hardware, soft-  
7 ware, and data, that are essential to the reliability  
8 of such systems. Such program shall include the  
9 identification and development of appropriate tech-  
10 nical and electronic resources, including hardware,  
11 software, and system equipment.

12 “(2) SHARING EXPERTISE.—As appropriate,  
13 the Secretary shall offer to share technical expertise  
14 developed under the program under paragraph (1),  
15 through consultation and assistance, with owners,  
16 operators, or users of systems for the generation,  
17 transmission, or distribution of electric energy lo-  
18 cated in the United States and with State commis-  
19 sions. In offering such support, the Secretary shall  
20 assign higher priority to systems serving facilities  
21 designated by the President pursuant to subsection  
22 (d)(1) and other critical-infrastructure facilities,  
23 which the Secretary shall identify in consultation  
24 with the Commission and other appropriate Federal  
25 agencies.

1           “(3) SECURITY CLEARANCES AND COMMUNICA-  
2           TION.—The Secretary shall facilitate and, to the ex-  
3           tent practicable, expedite the acquisition of adequate  
4           security clearances by key personnel of any entity  
5           subject to the requirements of this section to enable  
6           optimum communication with Federal agencies re-  
7           garding grid security threats, grid security  
8           vulnerabilities, and defense critical electric infra-  
9           structure vulnerabilities. The Secretary, the Com-  
10          mission, and other appropriate Federal agencies  
11          shall, to the extent practicable and consistent with  
12          their obligations to protect classified and protected  
13          information, share timely actionable information re-  
14          garding grid security threats, grid security  
15          vulnerabilities, and defense critical electric infra-  
16          structure vulnerabilities with appropriate key per-  
17          sonnel of owners, operators, and users of the bulk-  
18          power system and of defense critical electric infra-  
19          structure.

20          “(h) CERTAIN FEDERAL ENTITIES.—For the 11-year  
21          period commencing on the date of enactment of this sec-  
22          tion, the Tennessee Valley Authority and the Bonneville  
23          Power Administration shall be exempt from any require-  
24          ment under subsection (b) or (c) (except for any require-

1 ment addressing a malicious act using electronic commu-  
2 nication).”.

3 (b) CONFORMING AMENDMENTS.—

4 (1) JURISDICTION.—Section 201(b)(2) of the  
5 Federal Power Act (16 U.S.C. 824(b)(2)) is amend-  
6 ed by inserting “215A,” after “215,” each place it  
7 appears.

8 (2) PUBLIC UTILITY.—Section 201(e) of the  
9 Federal Power Act (16 U.S.C. 824(e)) is amended  
10 by inserting “215A,” after “215,”.

○