

113TH CONGRESS
2D 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.

IN THE HOUSE OF REPRESENTATIVES

MARCH 26, 2014

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

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 disruption
5 to the operation of those electronic devices or
6 communications networks, including hardware, software,
7 and data, that are essential to the reliability
8 of such systems. Such program shall include the
9 identification and development of appropriate technical
10 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 located
18 in the United States and with State commissions. In offering
19 such support, the Secretary shall assign higher priority to
20 systems serving facilities designated by the President pursuant
21 to subsection (d)(1) and other critical-infrastructure facilities,
22 which the Secretary shall identify in consultation
23 with the Commission and other appropriate Federal
24 agencies.
25

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,”.

○