

By: Hall

S.B. No. 83

A BILL TO BE ENTITLED

AN ACT

relating to protection of energy critical infrastructure from
electromagnetic, geomagnetic, terrorist, and cyber-attack threats.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Chapter 418, Government Code, is amended by
adding Subchapter I to read as follows:

SUBCHAPTER I. ELECTROMAGNETIC THREAT PREPAREDNESS

Sec. 418.201. ELECTROMAGNETIC THREAT PREPAREDNESS TASK
FORCE. (a) In this section, "energy critical infrastructure"
means an electrical power-generating facility, substation,
switching station, electrical control center, or electrical
transmission or distribution facility and includes an associated
electronic control center and other electronic infrastructure used
in electric power delivery.

(b) The electromagnetic threat preparedness task force is
created. The task force shall develop a comprehensive recovery
plan.

(c) The task force consists of 10 members appointed by the
chief described by Section 418.041. Each member must be a regional
emergency management representative.

(d) The task force shall:

(1) identify and develop technical and electronic
resources to assist the division in the division's functions;

(2) implement a program to educate owners and

1 operators of energy critical infrastructure and vital utility
2 facilities and emergency responders about electromagnetic,
3 geomagnetic, and cyber-attack threats;

4 (3) evaluate emergency planning and response
5 technologies related to electromagnetic, geomagnetic, and
6 cyber-attack threats;

7 (4) develop a comprehensive threat protection and
8 recovery plan for energy critical infrastructure and vital utility
9 facilities of this state against electromagnetic, geomagnetic,
10 terrorist, and cyber-attack threats; and

11 (5) identify and compile a comprehensive list of
12 contractors capable of performing work to increase the security of
13 the electric grid.

14 (e) Information collected by the task force related to the
15 security of the electric grid is confidential and is not subject to
16 disclosure under Chapter 552.

17 (f) Not later than September 1, 2018, the task force shall
18 prepare and submit to the governor and the legislature a report of
19 the task force's findings and recommendations.

20 (g) A member of the task force established under this
21 section is not entitled to compensation. Members may be reimbursed
22 for expenses as follows:

23 (1) a member is entitled to reimbursement for travel
24 and other necessary expenses as provided in the General
25 Appropriations Act; and

26 (2) a member appointed as a representative of a state
27 agency is eligible for reimbursement for travel and other necessary

1 expenses according to the applicable agency's policies.

2 (h) This section expires September 1, 2018.

3 Sec. 418.202. TECHNOLOGICAL HAZARDS. (a) In this section,
4 "energy critical infrastructure" means an electrical
5 power-generating facility, substation, switching station,
6 electrical control center, or electrical transmission or
7 distribution facility and includes an associated electronic
8 control center and other electronic infrastructure used in electric
9 power delivery.

10 (b) The division shall implement the comprehensive threat
11 protection and recovery plan developed by the electromagnetic
12 threat preparedness task force for energy critical infrastructure
13 and vital utility facilities of this state against electromagnetic,
14 geomagnetic, terrorist, and cyber-attack threats.

15 (c) The governor may instruct an agency to take actions as
16 are necessary to implement the comprehensive threat protection and
17 recovery plan developed by the electromagnetic threat preparedness
18 task force.

19 (d) Information collected by the division related to the
20 security of the electric grid is confidential and is not subject to
21 disclosure under Chapter 552.

22 SECTION 2. Chapter 39, Utilities Code, is amended by adding
23 Subchapter M to read as follows:

24 SUBCHAPTER M. GRID SECURITY

25 Sec. 39.601. INFORMATION RELATED TO GRID SECURITY. The
26 independent organization certified under Section 39.151 shall
27 collect and compile information related to the security of the

1 electric grid. The information is confidential and is not subject
2 to disclosure under Chapter 552, Government Code.

3 Sec. 39.602. ELECTRIC GRID SECURITY PROGRAM. (a) In this
4 section:

5 (1) "Committee" means the Electric Grid Security
6 Advisory Committee.

7 (2) "Energy critical infrastructure" has the meaning
8 assigned by Section 418.202, Government Code.

9 (b) The commission shall establish a program to meet
10 implementation deadlines and pay costs incurred to increase the
11 security of the electric grid in ERCOT. The program must be
12 designed to pay for:

13 (1) an audit related to security of the electric grid
14 and associated computer systems and networks conducted by:

15 (A) an independent security expert for a
16 transmission and distribution utility;

17 (B) an independent organization certified by the
18 commission under Section 39.151;

19 (C) an electric cooperative;

20 (D) a river authority; or

21 (E) a municipally owned utility operating in
22 ERCOT;

23 (2) reimbursement of an investment made or expense
24 incurred to implement a measure recommended by the committee or
25 implement a recommendation made in an audit conducted under
26 Subdivision (1) by:

27 (A) a transmission and distribution utility;

1 (B) an independent organization certified by the
2 commission under Section 39.151;

3 (C) an electric cooperative;

4 (D) a river authority; or

5 (E) a municipally owned utility operating in
6 ERCOT;

7 (3) an expense incurred by the committee related to
8 the retention of a consultant or other necessary expert to assist
9 the committee in performing a duty of the committee;

10 (4) reimbursement to a member of the committee for
11 travel expenses; and

12 (5) reimbursement of a cost incurred by the commission
13 in administering this section.

14 (c) Entities other than the commission seeking
15 reimbursement from the program shall provide adequate
16 documentation to the committee to demonstrate that the investment,
17 expense, or cost is eligible for reimbursement under this section.
18 The commission shall authorize reimbursement of an eligible
19 investment, expense, or cost on receipt of a certification from the
20 committee that the item is eligible under this section not later
21 than five business days after the date of the receipt of a valid
22 certification.

23 (d) The commission shall report each quarter the total
24 amount paid by the program for each of the categories listed in
25 Subsection (b) to the governor, lieutenant governor, and speaker of
26 the house of representatives.

27 (e) This section does not prevent recovery authorized by

1 this title for a cost incurred through a reasonable and necessary
2 expenditure related to an ongoing effort to secure electric
3 facilities from physical and cybersecurity threats by:

4 (1) a transmission and distribution utility;

5 (2) an independent organization certified by the
6 commission under Section 39.151;

7 (3) an electric cooperative;

8 (4) a river authority; or

9 (5) a municipally owned utility operating in ERCOT.

10 (f) The program may not pay for an audit described by
11 Subsection (b)(1) that is conducted by an independent security
12 expert unless the expert meets professional standards adopted by
13 commission rule that are at least as stringent as those required for
14 certification as a:

15 (1) certified information systems security
16 professional (CISSP) by the International Information System
17 Security Certification Consortium; or

18 (2) global industrial cyber security professional
19 (GICSP) by the Global Information Assurance Certification.

20 Sec. 39.603. GRID SECURITY ADVISORY COMMITTEE. (a) The
21 Electric Grid Security Advisory Committee is composed of the
22 following members:

23 (1) two members appointed by the governor;

24 (2) two members appointed by the lieutenant governor;

25 and

26 (3) two members appointed by the speaker of the house
27 of representatives.

1 (b) The governor shall designate a member of the committee
2 to serve as presiding officer.

3 (c) The committee shall convene at the call of the presiding
4 officer.

5 (d) The committee shall study the Texas electric grid and
6 the computer systems and networks related to the grid. The study
7 must:

8 (1) evaluate and summarize the current state of the
9 electric grid and associated computer systems and networks;

10 (2) research and consider potential security threats
11 to the electric grid and to associated computer systems and
12 networks;

13 (3) assess whether further efforts are needed to
14 secure the electric grid and associated computer systems and
15 networks against damage, including the threat of electromagnetic
16 pulse or other attacks and natural threats, including solar flares;

17 (4) recommend measures to secure the electric grid and
18 associated computer systems and networks against damage;

19 (5) recommend a program to develop technical expertise
20 in the protection of the electric transmission and distribution
21 system against electromagnetic, geomagnetic, and cyber-attack
22 threats;

23 (6) determine energy critical infrastructure and
24 vital utility facilities that are at risk from electromagnetic,
25 geomagnetic, and cyber-attack threats;

26 (7) evaluate technologies available to improve the
27 resiliency of energy critical infrastructure and vital utility

1 facilities against electromagnetic, geomagnetic, or cyber-attack
2 threats;

3 (8) evaluate the capabilities of energy critical
4 infrastructure and vital utility facilities to recover from
5 electromagnetic, geomagnetic, or cyber-attack threats; and

6 (9) develop a comprehensive plan to protect the energy
7 critical infrastructure and vital utility facilities of this state
8 against electromagnetic, geomagnetic, terrorist, and cyber-attack
9 threats.

10 (e) The committee may share its findings with any state
11 agency it considers important to the security of the electric grid
12 or associated computer systems or networks. To the extent allowed
13 by law, a state agency with which the committee shares information
14 is encouraged to implement any recommendations that the agency
15 determines will improve the security of the state's electric grid
16 or associated computer systems or networks.

17 (f) ERCOT shall cooperate with the committee to provide any
18 information and resources the committee considers important to the
19 study.

20 (g) A member of the committee is not entitled to
21 compensation but is entitled to reimbursement for the member's
22 travel expenses as provided by Chapter 660, Government Code, and
23 the General Appropriations Act.

24 (h) A vacancy on the committee shall be filled for the
25 unexpired term in the same manner as the original appointment.

26 (i) The committee is not subject to Chapter 2110, Government
27 Code.

1 (j) Not later than December 1, 2018, the committee shall
2 prepare a report of its findings, including any recommendations for
3 legislation resulting from the findings, and shall submit the
4 report to the governor, the lieutenant governor, and the speaker of
5 the house of representatives.

6 (k) The committee's work relates to sensitive matters of
7 security. Notwithstanding any other law, the meetings, work, and
8 findings of the committee are not subject to the requirements of
9 Chapter 551 or 552, Government Code.

10 Sec. 39.604. GRID PROTECTION. (a) This section applies to:

- 11 (1) a transmission and distribution utility;
12 (2) an electric cooperative operating in ERCOT;
13 (3) a river authority operating in ERCOT; and
14 (4) a municipally owned utility operating in ERCOT.

15 (b) Not later than December 31, 2018, each entity to which
16 this section applies shall assess and report to the technological
17 hazards unit of the Texas Division of Emergency Management the
18 vulnerabilities the equipment, facilities, and systems the utility
19 uses to provide power have from the following:

- 20 (1) a high altitude electromagnetic pulse device;
21 (2) geomagnetic storms; and
22 (3) intentional electromagnetic interference.

23 (c) Not later than December 31, 2021, each entity to which
24 this section applies shall complete enhancements to transformers,
25 control centers, substations, and other equipment sufficient to
26 comply with the following standards, as applicable to the equipment
27 or facility:

1 (1) MIL-STD 188-125-1, "High-Altitude Electromagnetic
2 Pulse (HEMP) Protection for Ground-Based C4I Facilities Performing
3 Critical, Time-Urgent Missions, Part 1: Fixed Facilities," April 7,
4 2005;

5 (2) Cigré TB 600, "Protection of High-Voltage Power
6 Network Control Electronics Against Intentional Electromagnetic
7 Interference (IEMI)," November 2014;

8 (3) IEEE Std 1642-2015, "IEEE Recommended Practice for
9 Protecting Publicly Accessible Computer Systems from Intentional
10 Electromagnetic Interference (IEMI)";

11 (4) IEC/TR 61000-1-3 Ed. 1.0 (2002-06):
12 Electromagnetic compatibility (EMC) - Part 1-3: General - The
13 effects of high-altitude EMP (HEMP) on civil equipment and systems;

14 (5) IEC/TR 61000-1-5 Ed. 1.0 (2004-11):
15 Electromagnetic compatibility (EMC) - Part 1-5: General - High
16 power electromagnetic (HPEM) effects on civil systems;

17 (6) IEC 61000-2-9 Ed. 1.0 (1996-02): Electromagnetic
18 compatibility (EMC) - Part 2: Environment - Section 9: Description
19 of HEMP environment - Radiated disturbance;

20 (7) IEC 61000-2-10 Ed. 1.0 (1998-11): Electromagnetic
21 compatibility (EMC) - Part 2-10: Environment - Description of HEMP
22 environment - Conducted disturbance;

23 (8) IEC 61000-2-11 Ed. 1.0 (1999-10): Electromagnetic
24 compatibility (EMC) - Part 2-11: Environment - Classification of
25 HEMP environments;

26 (9) IEC 61000-2-13 Ed. 1.0 (2005-03): Electromagnetic
27 compatibility (EMC) - Part 2-13: Environment - High-power

- 1 electromagnetic (HPEM) environments - Radiated and conducted;
2 (10) IEC 61000-4-23 Ed. 1.0 (2000-10):
3 Electromagnetic compatibility (EMC) - Part 4-23: Testing and
4 measurement techniques - Test methods for protective devices for
5 HEMP and other radiated disturbances;
6 (11) IEC 61000-4-24 Ed. 1.0 (2011-15):
7 Electromagnetic compatibility (EMC) - Part 4: Testing and
8 measurement techniques - Section 24: Test methods for protective
9 devices for HEMP conducted disturbance;
10 (12) IEC 61000-4-25 Ed. 1.1 (2012-05):
11 Electromagnetic compatibility (EMC) - Part 4-25: Testing and
12 measurement techniques - HEMP immunity test methods for equipment
13 and systems;
14 (13) IEC 61000-4-36 Ed. 1.0 (2014-11):
15 Electromagnetic compatibility (EMC) - Part 4-36: Testing and
16 measurement techniques - IEMI immunity test methods for equipment
17 and systems;
18 (14) IEC/TR 61000-5-3 Ed. 1.0 (1999-07):
19 Electromagnetic compatibility (EMC) - Part 5-3: Installation and
20 mitigation guidelines - HEMP protection concepts;
21 (15) IEC/TR 61000-5-6 Ed. 1.0 (2002-06):
22 Electromagnetic compatibility (EMC) - Part 5-6: Installation and
23 mitigation guidelines - Mitigation of external EM influences;
24 (16) IEC/TS 61000-5-8 Ed. 1.0 (2009-08):
25 Electromagnetic compatibility (EMC) - Part 5-8: Installation and
26 mitigation guidelines - HEMP protection methods for the distributed
27 infrastructure;

1 (17) IEC/TS 61000-5-9 Ed. 1.0 (2009-07):
2 Electromagnetic compatibility (EMC) - Part 5-9: Installation and
3 mitigation guidelines - System-level susceptibility assessments
4 for HEMP and HPEM; and

5 (18) IEC 61000-6-6 Ed. 1.0 (2003-04): Electromagnetic
6 compatibility (EMC) - Part 6-6: Generic standards - HEMP immunity
7 for indoor equipment.

8 (d) An entity to which this section applies that is required
9 to complete enhancements under this section may recover costs
10 incurred in completing the enhancements from the reimbursement
11 program established under Section 39.602.

12 SECTION 3. The governor, the lieutenant governor, and the
13 speaker of the house of representatives shall appoint members to
14 the Electric Grid Security Advisory Committee, as required by this
15 Act, as soon as practicable after the effective date of this Act,
16 but not later than the 120th day after the effective date of this
17 Act.

18 SECTION 4. This Act takes effect immediately if it receives
19 a vote of two-thirds of all the members elected to each house, as
20 provided by Section 39, Article III, Texas Constitution. If this
21 Act does not receive the vote necessary for immediate effect, this
22 Act takes effect September 1, 2017.