

By: Hall

S.B. No. 2231

A BILL TO BE ENTITLED

AN ACT

1
2 relating to the resilience of the electric grid and certain
3 municipalities.

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

5 SECTION 1. The legislature finds that:

6 (1) electric grid blackouts threaten the lives of the
7 citizens of this state and pose a disproportionately large risk to:

8 (A) the elderly, vulnerable, and underprivileged
9 within this state; and

10 (B) communities facing environmental justice
11 issues such as disproportionate environmental health burdens and
12 population vulnerabilities relating to facilities such as chemical
13 plants and refineries that can become environmental disaster areas
14 when taken off-line due to loss of electricity;

15 (2) the 16 critical infrastructures identified in
16 President Barack Obama's Presidential Policy Directive "Critical
17 Infrastructure Security and Resilience" (PPD-21) including water
18 and wastewater systems, food and agriculture, communications
19 systems, the energy sector including refineries and fuel
20 distribution systems, chemical plants, the financial sector,
21 hospitals and health care facilities, law enforcement and
22 government facilities, nuclear reactors, and other critical
23 functions depend on the electric grid in this state and make the
24 grid's protection vital to the economy of this nation and homeland

1 security;

2 (3) the blackout that occurred in this state in
3 February 2021 caused:

4 (A) death and suffering in this state;

5 (B) economic loss to this state's economy;

6 (C) impacts to all critical infrastructures in
7 this state;

8 (D) the dispatch of generation units that likely
9 exceeded limits established by the Environmental Protection Agency
10 for sulfur dioxide, nitrogen oxide, mercury, and carbon monoxide
11 emissions and wastewater release limits;

12 (E) radically increased pricing of electricity
13 that resulted in making electric power bills unaffordable to many
14 customers across this state; and

15 (F) the exacerbation of the COVID-19 pandemic
16 risk by forcing many of the state's citizens to consolidate at
17 warming centers and in other small spaces where warmth for survival
18 superseded social distancing protocols;

19 (4) a previous large-scale blackout occurred in this
20 state in February 2011 during which 4.4 million customers were
21 affected;

22 (5) this state is uniquely positioned to prevent
23 blackouts because this state is a net exporter of energy and is the
24 only state with an electric grid almost exclusively within its
25 territorial boundaries;

26 (6) the 2011 and 2021 blackouts call into question:

27 (A) whether too much risk has been accepted

1 regarding weatherization of electric generation infrastructure;

2 (B) whether this state lacks the internal
3 distribution structure and control systems to manage rolling
4 blackouts; and

5 (C) whether sufficient resources have been
6 allocated toward overall grid resilience;

7 (7) the governor has declared reform of the
8 independent organization certified under Section 39.151, Utilities
9 Code, for the ERCOT power region as an emergency item for the 87th
10 Legislature;

11 (8) public confidence in the resilience of the
12 electric grid in this state is essential to ensuring environmental
13 justice, economic prosperity, domestic tranquility, continuity of
14 government, and life-sustaining systems;

15 (9) a resilient electric grid that offers businesses
16 in this state continuity of operations in the event of a natural or
17 man-made disaster will be an unrivaled attraction for businesses to
18 expand or move their operations to this state and for protecting
19 what is important to this state, including its military
20 installations and its environment;

21 (10) current market incentives and regulations are not
22 sufficient for electric utilities to:

23 (A) prioritize grid security and resilience; and

24 (B) protect the grid against hazards;

25 (11) protection of the electric grid in this state
26 against hazards would assure businesses and the citizens of this
27 state that the "lights will be back on first in Texas" in the event

1 of a nationwide catastrophe affecting electric infrastructure,
2 sparing catastrophic societal and environmental consequences for
3 this state; and

4 (12) when this state begins implementation of the plan
5 for all hazards resilience described by Section 44.007, Utilities
6 Code, as added by this Act, to protect the electric grid in this
7 state, short-term and long-term economic benefit will far exceed
8 even the most optimistic estimates of the conventional economic
9 incentives provided by tax abatements to attract businesses to this
10 state.

11 SECTION 2. Subtitle B, Title 2, Utilities Code, is amended
12 by adding Chapter 44 to read as follows:

13 CHAPTER 44. GRID RESILIENCE

14 Sec. 44.001. DEFINITIONS. In this chapter:

15 (1) "All hazards" means:

16 (A) terrestrial weather including wind,
17 hurricanes, tornadoes, flooding, ice storms, extended cold weather
18 events, heat waves, and wildfires;

19 (B) seismic events including earthquakes and
20 tsunamis;

21 (C) physical threats including terrorist attacks
22 with direct fire, drones, explosives, and other methods of physical
23 sabotage;

24 (D) cyber attacks including malware attacks and
25 hacking of unprotected or compromised information technology
26 networks;

27 (E) manipulation of operational technology

1 devices including sensors, actuators, and drives;

2 (F) electromagnetic threats through man-made
3 radio frequency weapons, high altitude nuclear electromagnetic
4 pulse, and naturally occurring geomagnetic disturbances;

5 (G) electric generation supply chain
6 vulnerabilities including insecure or inadequate fuel
7 transportation or storage; and

8 (H) insider threats caused by compromised or
9 hostile personnel working within government or the utility
10 industry.

11 (2) "Micro-grid" means a group of interconnected loads
12 and distributed energy resources inside clearly defined electrical
13 boundaries that act as a single controllable entity with respect to
14 the grid.

15 (3) "Security commission" means the Texas Grid
16 Security Commission.

17 Sec. 44.002. TEXAS GRID SECURITY COMMISSION. (a) The Texas
18 Grid Security Commission is composed of the following members:

19 (1) a representative of the Texas Division of
20 Emergency Management appointed by the chief of that division;

21 (2) a representative of the State Office of Risk
22 Management appointed by the risk management board;

23 (3) a representative of the independent organization
24 certified under Section 39.151 for the ERCOT power region appointed
25 by the chief executive officer of that organization;

26 (4) a representative of the Texas Military Department
27 appointed by the adjutant general of that department;

1 (5) a representative of the Texas Military
2 Preparedness Commission appointed by that commission;

3 (6) a representative of the Office of State-Federal
4 Relations appointed by the director of that office;

5 (7) a representative of the Department of Information
6 Resources appointed by the executive director of that department;

7 (8) a representative of power generation companies
8 appointed by the chief of the Texas Division of Emergency
9 Management;

10 (9) two representatives of transmission and
11 distribution utilities appointed by the chief of the Texas Division
12 of Emergency Management;

13 (10) three individuals with expertise in critical
14 infrastructure protection appointed by the chief of the Texas
15 Division of Emergency Management, to represent the public interest;

16 (11) one representative appointed by the chief of the
17 Texas Division of Emergency Management from each of the following
18 essential services sectors:

19 (A) law enforcement;

20 (B) emergency services;

21 (C) communications;

22 (D) water and sewer services;

23 (E) health care;

24 (F) financial services;

25 (G) food and agriculture;

26 (H) transportation; and

27 (I) energy;

1 (12) an expert in the field of higher education
2 appointed by the chief of the Texas Division of Emergency
3 Management; and

4 (13) an expert in the field of electricity markets and
5 regulations appointed by the chief of the Texas Division of
6 Emergency Management.

7 (b) The chief of the Texas Division of Emergency Management
8 may invite members or former members of the United States Air
9 Force's Electromagnetic Defense Task Force to the security
10 commission.

11 (c) The Texas Division of Emergency Management shall
12 designate a member of the security commission to serve as presiding
13 officer.

14 (d) The security commission shall convene at the call of the
15 presiding officer.

16 (e) The security commission shall report to the chief of the
17 Texas Division of Emergency Management.

18 (f) A vacancy on the security commission is filled by
19 appointment for the unexpired term in the same manner as the
20 original appointment.

21 (g) To the extent possible, individuals appointed to the
22 security commission must be residents of this state.

23 (h) The presiding officer of the security commission or the
24 chief of the Texas Division of Emergency Management may invite
25 subject matter experts to advise the security commission, including
26 individuals recognized as experts in the fields of electricity
27 markets, cybersecurity of grid control systems, electromagnetic

1 pulse mitigation, terrestrial and solar weather, and micro-grids.
2 The presiding officer may invite an individual for this purpose
3 regardless of whether the individual is a resident of this state.

4 Sec. 44.003. GRID RESILIENCE INFORMATION. (a) Each of the
5 following members of the security commission shall apply for a
6 secret security clearance or an interim secret security clearance
7 to be granted by the federal government:

8 (1) the representative of the independent
9 organization certified under Section 39.151 for the ERCOT region;

10 (2) the representative of the Texas Division of
11 Emergency Management; and

12 (3) the representative of the State Office of Risk
13 Management.

14 (b) A member of the security commission listed under
15 Subsection (a) who is granted an applicable security clearance
16 under that subsection is a member of the information security
17 working group.

18 (c) The information security working group shall determine:

19 (1) which information received by the security
20 commission that is used in determining the vulnerabilities of the
21 electric grid or that is related to measures to be taken to protect
22 the grid is confidential and not subject to Chapter 552, Government
23 Code;

24 (2) which members of the security commission may
25 access which types of information received by the security
26 commission; and

27 (3) which members, other than members of the working

1 group, should apply for a secret security clearance or interim
2 clearance granted by the federal government.

3 (d) Information that the information security working group
4 determines is confidential under Subsection (c) shall be stored and
5 maintained by the independent organization certified under Section
6 39.151 for the ERCOT power region.

7 (e) The security commission must maintain a reasonable
8 balance between public transparency and security for information
9 determined to be confidential under Subsection (c).

10 (f) Nothing in this section abrogates any rights or remedies
11 under Chapter 552, Government Code.

12 Sec. 44.004. GRID RESILIENCE EVALUATION. (a) The security
13 commission shall evaluate, using available information on past
14 blackouts in ERCOT, all hazards to the ERCOT electric grid,
15 including threats which can cause future blackouts.

16 (b) The security commission may create groups or teams to
17 address each hazard as necessary. The security commission must
18 assess each hazard both on the likelihood of occurrence of the
19 hazard and the potential consequences of the hazard.

20 (c) The security commission shall identify methods by which
21 this state can support an overall national deterrence policy as
22 proposed by the Cyberspace Solarium Commission, including by:

23 (1) identifying means to ensure that all hazards
24 resilience for electric utilities supports critical national
25 security functions in this state; and

26 (2) engaging the Texas National Guard to be trained as
27 first responders to cybersecurity threats to the ERCOT electric

1 grid and other critical infrastructure.

2 (d) The security commission shall evaluate nuclear
3 generation sites in this state, the resilience of each nuclear
4 reactor to all hazards, and the resilience to all hazards of
5 off-site power for critical safety systems that support the reactor
6 and spent fuel. The security commission may communicate with the
7 Nuclear Regulatory Commission to accomplish the evaluation.

8 (e) The security commission shall evaluate current Critical
9 Infrastructure Protection standards established by the North
10 American Electric Reliability Corporation and standards set by the
11 National Institute of Standards and Technology to determine the
12 most appropriate standards for protecting grid infrastructure in
13 this state.

14 (f) The security commission shall investigate the steps
15 that local communities and other states have taken to address grid
16 resilience. The security commission may request funding to conduct
17 site visits to these locations as required.

18 (g) The security commission shall identify universities
19 based in this state that have expertise in cybersecurity and other
20 matters that can contribute to the security commission's goal of
21 mitigating all hazards to the grid in this state.

22 (h) In carrying out the security commission's duties under
23 this section, the security commission may solicit information from:

24 (1) defense contractors with experience protecting
25 defense systems from electromagnetic pulse;

26 (2) electric utilities that have developed
27 electromagnetic pulse protections for the utilities' grid assets;

1 (3) the United States Department of Homeland Security;
2 and

3 (4) the Commission to Assess the Threat to the United
4 States from Electromagnetic Pulse (EMP) Attack.

5 Sec. 44.005. GRID RESILIENCE STANDARDS. Based on the
6 findings of the evaluations and investigations conducted under
7 Section 44.004, the security commission shall develop resilience
8 standards for critical components of the ERCOT electric grid.

9 Sec. 44.006. CONTRACTOR SUPPORT FOR CRITICAL SYSTEM AND
10 COMPONENT RESILIENCE. (a) The State Office of Risk Management,
11 with assistance from the security commission, shall select
12 contractors with proven expertise to identify critical systems and
13 components of the ERCOT electric grid vulnerable to hazards
14 described by Section 44.004(a) with a specific emphasis on the most
15 dangerous cyber and electromagnetic threats.

16 (b) A contractor selected under Subsection (a) must
17 identify the critical components, including industrial control
18 systems, not later than six months after the date the contractor is
19 engaged.

20 (c) Not later than January 1, 2023, an entity that owns or
21 operates a component identified by a contractor under Subsection
22 (a) as critical shall upgrade the component as necessary for the
23 component to meet the applicable standards set by the security
24 commission under Section 44.005.

25 (d) The State Office of Risk Management shall select
26 contractors with demonstrated expertise to verify whether an entity
27 with a component identified as critical under Subsection (a) has

1 upgraded components as required by Subsection (c).

2 Sec. 44.007. PLAN FOR ALL HAZARDS RESILIENCE. (a) Not
3 later than January 1, 2022, the security commission shall prepare
4 and deliver to the legislature a plan for protecting the ERCOT
5 electric grid from all hazards, including a catastrophic loss of
6 power in the state.

7 (b) The plan must include:

8 (1) weatherizing requirements that may be implemented
9 not later than January 1, 2023, to prevent blackouts from extreme
10 cold weather events, an analysis of whether these requirements
11 would induce cyber vulnerabilities, and an analysis of the
12 associated costs for these requirements;

13 (2) provisions that may be implemented not later than
14 January 1, 2023, for installing, replacing, or upgrading industrial
15 control systems and associated networks, or the use of compensating
16 controls or procedures, in critical facilities to address cyber
17 vulnerabilities;

18 (3) provisions that may be implemented not later than
19 January 1, 2026, for installing, replacing, or upgrading extra
20 high-voltage power transformers and supervisory control and data
21 acquisition systems to withstand 100 kilovolts/meter E1
22 electromagnetic pulses and 85 volts/kilometer E3 electromagnetic
23 pulses;

24 (4) a timeline for making improvements to remaining
25 infrastructure to meet standards set by the security commission
26 under Section 44.005;

27 (5) long-term resilience provisions for supporting

1 industries including:

2 (A) nuclear reactors, materials, and waste;

3 (B) fuel supply;

4 (C) health care;

5 (D) communications;

6 (E) water and sewer services;

7 (F) food supply; and

8 (G) transportation; and

9 (6) any additional provisions considered necessary by
10 the security commission.

11 (c) The security commission may consult with the Private
12 Sector Advisory Council in developing the plan.

13 (d) The Texas Division of Emergency Management shall
14 incorporate the plan into the state emergency management plan and
15 update the state emergency management plan as necessary to
16 incorporate progressive resilience improvements.

17 Sec. 44.008. GRID RESILIENCE REPORT. (a) Not later than
18 January 1 of each year, the security commission shall prepare and
19 deliver a non-classified report to the legislature, the governor,
20 and the commission assessing natural and man-made threats to the
21 electric grid and efforts to mitigate the threats.

22 (b) The security commission shall make the report available
23 to the public.

24 (c) In preparing the report, the security commission may
25 hold confidential or classified briefings with federal, state, and
26 local officials as necessary.

27 Sec. 44.009. ALTERNATIVE TIMELINE OR STANDARD. A panel

1 composed of members of the security commission may approve a
2 resilience standard or implementation timeline for an electric
3 utility or other entity that differs from a resilience standard or
4 implementation timeline adopted under Section 44.006.

5 Sec. 44.010. RESILIENCE COST RECOVERY. A regulatory
6 authority shall include in establishing the rates of an electric
7 utility consideration of the costs incurred to install, replace, or
8 upgrade facilities or equipment to meet a resilience standard
9 established under this chapter. A regulatory authority shall
10 presume that costs incurred to meet a resilience standard under
11 this chapter are reasonable and necessary expenses.

12 Sec. 44.011. MICRO-GRIDS. (a) The security commission
13 shall establish resilience standards for micro-grids and certify a
14 micro-grid that meets the standards. The standards must be
15 developed for both alternating current and direct current
16 micro-grids.

17 (b) Except as provided by Subsection (c), a municipality or
18 other political subdivision may not enact or enforce an ordinance
19 or other measure that bans, limits, or otherwise regulates inside
20 the boundaries or extraterritorial jurisdiction of the
21 municipality or political subdivision a micro-grid that is
22 certified by the security commission under this section.

23 (c) The owner or operator of a micro-grid certified by the
24 security commission is a power generation company and is required
25 to register under Section 39.351(a). The owner or operator of the
26 micro-grid is entitled to:

- 27 (1) interconnect the micro-grid;

- 1 (2) obtain transmission service for the micro-grid;
- 2 and
- 3 (3) use the micro-grid to sell electricity and
- 4 ancillary services at wholesale in a manner consistent with the
- 5 provisions of this title and commission rules applicable to a power
- 6 generation company or an exempt wholesale generator.

7 SECTION 3. Not later than January 1, 2023, the Texas Grid
8 Security Commission shall prepare and deliver a report to the
9 legislature on the progress of implementing resilience standards
10 adopted and implemented under Sections 44.005 and 44.006, Utilities
11 Code, as added by this Act.

12 SECTION 4. This Act takes effect immediately if it receives
13 a vote of two-thirds of all the members elected to each house, as
14 provided by Section 39, Article III, Texas Constitution. If this
15 Act does not receive the vote necessary for immediate effect, this
16 Act takes effect September 1, 2021.