

## **BILL ANALYSIS**

Senate Research Center

S.B. 1606  
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As Filed

### **AUTHOR'S / SPONSOR'S STATEMENT OF INTENT**

The 82nd Legislature failed to protect the grid after the 2011 winter storm. That failure resulted in the February 2021 winter storm giving millions of Texans firsthand experience with power outages varying from a few hours to nearly a week. Apart from the disruption of residences losing power, an extended power outage has economy-crippling financial implications, potentially unraveling our modern society. Electricity is no longer a luxury, it has risen in importance to be behind only air and water in sustaining life. Sustainable economic prosperity for future generations of Texans is dependent upon a resilient electrical grid.

This bill would provide for continued economic prosperity for the state and prepare for increased future demand by creating the Texas Grid Security Commission under the direction of the Texas Division of Emergency Management to oversee the process by which the critical infrastructure of the power grid is identified and hardened. This bill would also promote resilient energy communities that could protect against a catastrophic loss of power as well as respond quickly in the event of a major outage.

As proposed, S.B. 1606 amends current law relating to protecting the population of Texas, its environment, and its most vulnerable communities, promoting the resilience of the electric grid and certain municipalities.

### **RULEMAKING AUTHORITY**

This bill does not expressly grant any additional rulemaking authority to a state officer, institution, or agency.

### **SECTION BY SECTION ANALYSIS**

SECTION 1. Provides that the legislature finds that:

- (1) electric grid blackouts threaten the lives of the citizens of Texas and pose a disproportionately large risk to the elderly, vulnerable and underprivileged within our state and especially communities facing environmental justice issues such as disproportionate environmental health burdens and population vulnerabilities to facilities such as chemical plants and refineries that can become environmental disaster areas when taken offline due to loss of electricity.
- (2) all 16 critical infrastructures identified in President Barack Obama's Presidential Policy Directive 21 (PPD-21) including water and wastewater services; food and agriculture; communications systems; the energy sector including refineries and fuel distribution systems; chemical plants; the financial sector; hospitals and health care facilities; law enforcement and government facilities; nuclear reactors; and countless other critical functions depend on the state's electric grid, making the grid's protection vital to our economy and homeland security;
- (3) the February 2021 Texas Blackout caused death and suffering to the citizens of Texas, economic loss to the Texas economy, impacts to all critical infrastructures in Texas, the dispatch of generation units that likely exceeded Environmental Protection Agency (EPA) limits for sulfur dioxide, nitrogen oxide, mercury, and carbon monoxide

emissions, as well as wastewater release limits, radically increased pricing of electricity that resulted in electric power bills unaffordable by many customers across the state, and exacerbated the COVID-19 pandemic risk by forcing many of the state's citizens to consolidate at warming centers and in other small spaces where warmth for survival superseded social distancing;

(4) a previous large-scale blackout occurred in Texas in February 2011 during which 4.4 million customers were affected;

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

(6) the 2011 and 2021 blackouts call into question whether too much risk has been accepted regarding weatherization of electric generation infrastructure, whether the state lacks the internal distribution structure and control systems to manage rolling blackouts, and whether sufficient resources have been allocated toward overall grid resilience;

(7) Governor Gregg Abbott has declared reform of the Electricity Reliability Council of Texas (ERCOT) as an emergency item for the 87th Texas Legislature;

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

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

(10) insufficient market incentives or regulations exist for electric utilities to prioritize security and resilience, and to protect the grid against "all hazards;"

(11) protection of the Texas electric grid against "all hazards" would assure businesses and the citizens of this state that the "lights will be back on first in Texas" in the event of a nationwide catastrophe affecting electric infrastructure, sparing catastrophic societal and environmental consequences for this state;

(12) when this state begins implementation of the "all hazards resilience" plan to protect the state's electric grid, short-term and long-term economic benefit will far exceed even the most optimistic estimates of the conventional economic incentives provided by tax abatements to attract businesses to this state;

SECTION 2. Amends Subtitle B, Title 2, Utilities Code, by adding Chapter 44, as follows:

#### CHAPTER 44. GRID RESILIENCE

Sec. 44.001. DEFINITIONS. Defines "all hazards resilience," "EMP Commission reports," "micro-grid," and "security commission."

Sec. 44.002. TEXAS GRID SECURITY COMMISSION. (a) Requires the Texas Grid Security Commission (security commission) to report to the Chief of the Texas Division of Emergency Management (TDEM) and provides that the security commission is composed of the following members:

(1) a representative of TDEM appointed by the chief of TDEM;

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

(3) a representative of the independent organization certified under Section 39.151 (Essential Organizations) for the ERCOT region appointed by the chief executive officer of the organization;

(4) a representative of the Texas Military Department (TMD) appointed by the adjutant general of TMD;

(5) a representative of the Texas Military Preparedness Commission (TMPC) appointed by TMPC;

(6) a representative of the Office of State-Federal Relations (OSFR) appointed by the director of OSFR;

(7) a representative of the Department of Information Resources (DIR) appointed by the executive director of DIR;

(8) a representative of power generation companies appointed by the chief of TDEM;

(9) two representatives of transmission and distribution utilities appointed by the chief of TDEM;

(10) three members of the public with expertise in critical infrastructure protection, to represent the public interest.

(11) one representative appointed by the chief TDEM from each of certain essential services sectors.

(12) an expert in the field of higher education appointed by the chief of TDEM.

(13) an expert in the field of electricity markets and regulations appointed by the chief of TDEM.

(b) Authorizes the chief of TDEM to invite members or former members of the United States Air Force's Electromagnetic Defense Task Force (EDTF) to the security commission.

(c) Requires TDEM to designate a member of the security commission to serve as presiding officer.

(d) Requires the security commission to convene at the call of the presiding officer.

(e) Provides that a vacancy on the security commission is filled by appointment for the unexpired term in the same manner as the original appointment.

(f) Provides that members of the security commission will primarily be residents of the state of Texas or bordering states within ERCOT's jurisdiction. Authorizes the presiding officer or the chief of the TDEM, however, to invite additional subject matter experts including, but not limited to, those recognized as experts in the fields of electricity markets, cybersecurity of grid control systems, Electromagnetic Pulse (EMP) mitigation, terrestrial and solar weather, and micro-grids from outside Texas as needed.

Sec. 44.003. GRID RESILIENCE INFORMATION. (a) Provides that some information used in determining the vulnerabilities of the electric grid or that is related to measures to be taken to protect the grid may be confidential and not subject to Chapter 552 (Public Information), Government Code.

(b) Requires that information deemed confidential by Subsection (a) be stored and maintained by the independent organization certified under Section 39.151 for the ERCOT region.

(c) Provides that the following members of the security commission will lead an information security working group and are required to apply for a secret security clearance or an interim secret security clearance to be granted by the federal government:

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

(2) the representative of TDEM; and

(3) the representative of SORM.

(d) Provides that the information security working group will determine what information should be categorized as confidential information as described by Subsection (a), which particular members of the security commission are authorized to access various types of information, and which additional members should apply for a secret security clearance or interim clearance granted by the federal government.

(e) Requires that a reasonable balance of public transparency, with regard to confidential information as described by Subsection (a), be maintained. Provides that nothing in this section abrogates any rights or remedies under Chapter 552, Government Code.

Sec. 44.004. GRID RESILIENCE EVALUATION. (a) Provides that the security commission will evaluate all hazards to the ERCOT electric grid by utilizing all available information on past blackouts in the ERCOT system as well as threats which can cause future blackouts utilizing the definition of "all hazards resilience" in Sec. 44.001(1). Provides that the security commission is authorized to create sub-groups or teams to address each hazard as needed and is required to assess hazards both on the likelihood and the level of consequence of each hazard.

(b) Requires the security commission to identify methods where the state can support an overall National Deterrence Policy as proposed by the Cyberspace Solarium Commission by:

(i) identifying how to ensure all hazards resilience for electric utilities supporting critical national security functions within the state; and

(ii) engaging the Texas National Guard to be trained as first responders to cybersecurity threats to the ERCOT grid and other critical infrastructures.

(c) Requires the security commission to evaluate the state's nuclear generation sites and the all hazards resilience of the reactors as well as off-site power for critical safety systems that support the reactor and spent fuel. Provides that the security commission has direct liaison authority to communicate with the Nuclear Regulatory Commission (NRC) to accomplish this evaluation.

(d) Requires the security commission to evaluate current Critical Infrastructure Protection (CIP) standards established by the North American Electric Reliability Corporation (NERC) and the National Institute of Standards and Technology (NIST) standards to determine the most appropriate standards for protecting the state's grid infrastructure.

(e) Requires the security commission to explore what local communities and other states have done to address grid resilience, Authorizes the security commission to request funding to conduct site visits to these locations as required.

(f) Requires the security commission to identify Texas-based universities which can contribute with expertise in cybersecurity and other areas to mitigate all hazards.

(g) Requires the security commission to solicit information from defense contractors with experience protecting defense systems from EMP, as well as electric utilities that have developed EMP protections for their grid assets.

(h) Requires the security commission to solicit information from the United States Department of Homeland Security which has published EMP Protection and Resilience Guidelines for Critical Infrastructure and Equipment that can be used to mitigate the effects of such a disaster.

(i) Provides that the security commission will solicit information from the Congressional EMP Commission which assesses that protection against the worst threat, nuclear EMP attack, will mitigate lesser threats.

Sec. 44.005. CONTRACTOR SUPPORT FOR CRITICAL SYSTEM AND COMPONENT RESILIENCE. (a) Requires SORM, with the assistance of the security commission, to select contractors with proven expertise to identify critical systems and components of the ERCOT electric grid vulnerable to "all hazards," with a specific emphasis on the most dangerous cyber and electromagnetic threats. Requires the contractors to have the demonstrated expertise to identify the critical components, including industrial control systems, before the expiration of six months after the date the contractors are engaged.

(b) Requires that an entity that owns or operates a component identified by the contractor under Subsection (a) as critical, not later than January 1, 2023, to upgrade the components as necessary for the components to meet the applicable standard proposed in the EMP Commission reports.

(c) Requires SORM to select contractors with demonstrated expertise to verify whether affected entities have identified potential affected systems and components and whether these entities have upgraded systems and components as required by Subsection (b).

Sec. 44.006. PLAN FOR ALL HAZARDS RESILIENCE. (a) Requires the security commission, not later than January 1, 2022, to prepare and deliver to the legislature a plan for protecting the ERCOT grid from a catastrophic loss of power in the state.

(b) Requires that the plan include:

(1) provisions for determining weatherizing requirements to prevent blackouts from extreme cold weather events, whether these requirements will induce cyber vulnerabilities, and the associated costs for these requirements not later than January 1, 2022;

(2) provisions for installing, replacing, or upgrading industrial control systems and associated networks (or the use of compensating controls/procedures) in critical facilities to address cyber vulnerabilities not later than January 1, 2022;

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

(4) a timeline for upgrading remaining infrastructure to meet recommendations of the EMP Commission reports;

(5) long-term resilience provisions for supporting certain industries.

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

(c) Authorizes the security commission to consult with the Private Sector Advisory Council in developing the plan.

(d) Requires TDEM to incorporate the plan into the state emergency management plan and update the state emergency management plan as necessary to incorporate progressive resilience improvements.

Sec. 44.007. ALTERNATIVE TIMELINE OR STANDARD. Authorizes a panel composed of members of the security commission to approve a resilience standard or implementation timeline for an electric utility or other entity that differs from a resilience standard or implementation timeline adopted under Section 44.005.

Sec. 44.008. RESILIENCE COST RECOVERY. Requires a regulatory authority to include in establishing the rates of an electric utility consideration of the costs incurred to install, replace, or upgrade facilities or equipment to meet a resilience standard established under this chapter. Requires a regulatory authority to presume that costs incurred to meet a resilience standard under this chapter are reasonable and necessary expenses.

Sec. 44.009. MICRO-GRIDS. (a) Requires the security commission to establish resilience standards for micro-grids and certify a micro-grid that meets the standards. Requires that these standards be developed for both alternating current (AC) and direct current (DC) micro-grids.

(b) Prohibits a municipality or other political subdivision, except as provided by Subsection (c), from enacting or enforcing an ordinance or other measure that bans, limits, or otherwise regulates inside the boundaries or extraterritorial jurisdiction of the municipality or political subdivision a micro-grid that is certified by the security commission under this section.

(c) Provides that the owner or operator of a micro-grid certified by the security commission is a power generation company and is required to register under Section 39.351(a) (relating to the requirement of a power grid to establish one or more independent organizations to ensure certain functions of the network). Provides that the owner or operator of the micro-grid is entitled to:

(1) interconnect the micro-grid;

(2) obtain transmission service for the micro-grid; and

(3) use the micro-grid to sell electricity and ancillary services at wholesale in a manner consistent with the provisions of Title 2 (Public Utility Regulatory Act) and commission rules applicable to a power generation company or an exempt wholesale generator.

SECTION 3. Amends Chapter 380, Local Government Code, by adding Section 380.004, as follows:

Sec. 380.004. FIVE STAR GOLD RESILIENT COMMUNITIES. (a) Requires the security commission to establish resilience standards for municipalities in certain essential service areas.

(b) Requires that standards for energy systems under Subsection (a) include provisions to ensure that energy, electric power, and fuel supplies are protected and available for recovery in the event of a catastrophic power outage.

(c) Authorizes the security commission, on the application of a municipality for the designation, to designate a municipality that meets the resilience standards in the applicable service area as:

- (1) a Resilient Emergency Services Community;
- (2) a Resilient Communications Systems Community;
- (3) a Resilient Clean Water and Sewer Services Community;
- (4) a Resilient Health Care Systems Community;
- (5) a Resilient Financial Services Community;
- (6) a Resilient Energy Community; or
- (7) a Resilient Transportation Community.

(d) Authorizes the security commission to designate a municipality that meets the resilience standards in five of the seven service areas as a Five Star Gold Resilient Community.

(e) Prohibits a municipality from using a resilient community designation in advertising, marketing, or economic development initiatives unless the security commission has awarded the municipality with the designation in the applicable service area or as a Five Star Gold Resilient Community.

(f) Prohibits a municipality that does not qualify in at least five of the seven areas as a resilient community from offering economic incentives or tax abatements for any purposes for any entity to locate in the municipality.

SECTION 4. Requires the security commission, not later than January 1, 2023, to prepare and deliver a report to the legislature on the progress of implementing resilience standards adopted under Sections 44.004 and 44.005, Utilities Code, as added by this Act.

SECTION 5. Requires the commission, not later than January 1 of each year, to prepare and deliver a non-classified report to the legislature, the Governor and the Public Utility Commission of Texas assessing natural and man-made threats to the electric grid and efforts to mitigate the threats. Requires that such report be prepared for public distribution. Requires the commission to hold confidential or classified briefings with officials as necessary.

SECTION 6. Effective date: upon passage or September 1, 2021.