By:  Hall S.B. No. 2231

A BILL TO BE ENTITLED

AN ACT

relating to the resilience of the electric grid and certain municipalities.

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

SECTION 1.  The legislature finds that:

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

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

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

(2)  the 16 critical infrastructures identified in President Barack Obama's Presidential Policy Directive "Critical Infrastructure Security and Resilience" (PPD-21) including water and wastewater systems, 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 other critical functions depend on the electric grid in this state and make the grid's protection vital to the economy of this nation and homeland security;

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

(A)  death and suffering in this state;

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

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

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

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

(F)  the exacerbation of 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many of the state's citizens to consolidate at warming centers and in other small spaces where warmth for survival superseded social distancing protocols;

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

(5)  this state is uniquely positioned to prevent blackouts because this state 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:

(A)  whether too much risk has been accepted regarding weatherization of electric generation infrastructure;

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

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

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

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

(9)  a resilient electric grid that offers businesses in this state 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 this state, including its military installations and its environment;

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

(A)  prioritize grid security and resilience; and

(B)  protect the grid against hazards;

(11)  protection of the electric grid in this state against 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; and

(12)  when this state begins implementation of the plan for all hazards resilience described by Section 44.007, Utilities Code, as added by this Act, to protect the electric grid in this state, 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.  Subtitle B, Title 2, Utilities Code, is amended by adding Chapter 44 to read as follows:

CHAPTER 44. GRID RESILIENCE

Sec. 44.001.  DEFINITIONS. In this chapter:

(1)  "All hazards" means:

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

(B)  seismic events including earthquakes and tsunamis;

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

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

(E)  manipulation of operational technology devices including sensors, actuators, and drives;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A)  law enforcement;

(B)  emergency services;

(C)  communications;

(D)  water and sewer services;

(E)  health care;

(F)  financial services;

(G)  food and agriculture;

(H)  transportation; and

(I)  energy;

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

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

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

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

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

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

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

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

(h)  The presiding officer of the security commission or the chief of the Texas Division of Emergency Management may invite subject matter experts to advise the security commission, including individuals recognized as experts in the fields of electricity markets, cybersecurity of grid control systems, electromagnetic pulse mitigation, terrestrial and solar weather, and micro-grids. The presiding officer may invite an individual for this purpose regardless of whether the individual is a resident of this state.

Sec. 44.003.  GRID RESILIENCE INFORMATION. (a) Each of the following members of the security commission shall 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 the Texas Division of Emergency Management; and

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

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

(c)  The information security working group shall determine:

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

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

(3)  which members, other than members of the working group, should apply for a secret security clearance or interim clearance granted by the federal government.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(d)  The State Office of Risk Management shall select contractors with demonstrated expertise to verify whether an entity with a component identified as critical under Subsection (a) has upgraded components as required by Subsection (c).

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

(b)  The plan must include:

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

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

(3)  provisions that may be implemented not later than January 1, 2026, 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;

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

(5)  long-term resilience provisions for supporting industries including:

(A)  nuclear reactors, materials, and waste;

(B)  fuel supply;

(C)  health care;

(D)  communications;

(E)  water and sewer services;

(F)  food supply; and

(G)  transportation; and

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

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

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

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

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

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

Sec. 44.009.  ALTERNATIVE TIMELINE OR STANDARD. A panel composed of members of the security commission may 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 44.006.

Sec. 44.010.  RESILIENCE COST RECOVERY. A regulatory authority shall 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. A regulatory authority shall presume that costs incurred to meet a resilience standard under this chapter are reasonable and necessary expenses.

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

(b)  Except as provided by Subsection (c), a municipality or other political subdivision may not enact or enforce 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)  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). 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 this title and commission rules applicable to a power generation company or an exempt wholesale generator.

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

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