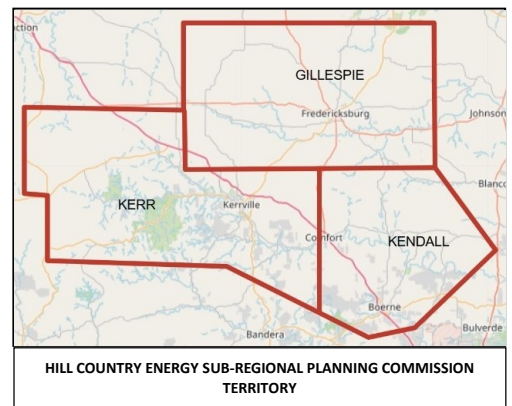


HILL COUNTRY ENERGY SUB-REGIONAL PLANNING COMMISSION

July 20, 2026

Mr. Roberto Madrigal
Area Engineer
1832 Sidney Baker St
Kerrville, TX 78028
Via email to: Roberto.Madrigal@txdot.gov



Subject: Request for TxDOT Emergency Transportation Study Related to the Proposed Battery Energy Storage System Near Interstate 10 and FM 479, Mountain Home, Texas

Dear Mr. Madrigal,

On behalf of the **Hill Country Energy Sub-Regional Planning Commission (HCESRPC)**, I respectfully request that the Texas Department of Transportation conduct an emergency transportation and traffic management study concerning the proposed 120 MW Battery Energy Storage System (BESS) planned by esVolta near Interstate 10 and Ranch Road 479 in Mountain Home, Texas. The proposed facility is planned for a 17-acre tract* immediately adjacent to the LCRA substation just north of Interstate 10. A Kerr County Appraisal District map illustrating the location is attached.

Our request is straightforward.

Before this project moves through the permitting process, we believe it is important to understand the transportation and emergency management implications should a significant incident ever require the temporary closure of Interstate 10.

Battery Energy Storage Systems have experienced thermal runaway fires at facilities in the United States and internationally. These events have demonstrated that lithium-ion battery fires can be difficult to extinguish, may burn for extended periods, and can generate extremely hazardous smoke requiring specialized emergency response. The attached Commissioner Briefing Package document includes examples of previous BESS incidents for reference.

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Website: www.HCESRPC.com

The U.S. Department of Transportation's **2024 Emergency Response Guidebook**, Guide 147, recommends substantial isolation and evacuation distances (500 meters in all directions) including emergency responders for fires associated with lithium-ion batteries. While the Texas State Fire Marshal's Office has indicated that the probability of such an event is low, the consequences of a major incident adjacent to one of Texas' busiest interstate highways could be significant, especially considering the huge plume of toxic smoke that could be generated from a large BESS facility fire.

Because the proposed facility is located immediately adjacent to Interstate 10, a major incident could require the temporary closure of both Interstate 10 and Ranch Road 479 for an extended period. According to TxDOT's statewide traffic count map, more than 16,000 vehicles travel this section of Interstate 10 each day. A prolonged closure would have important implications for public safety, emergency response, interstate commerce, and local communities.

For these reasons, we respectfully request that TxDOT:

- Evaluate the transportation risks associated with the proposed facility location.
- Develop a preliminary emergency traffic rerouting plan in the event Interstate 10 must be closed for an extended period.
- Estimate the potential economic and social impacts of such a closure.
- Identify any transportation improvements or planning measures that should be considered before the project proceeds.

Our intent is not to prejudice the outcome of the permitting process. Rather, we seek to ensure that transportation planning keeps pace with infrastructure development and that emergency response considerations are fully understood before critical decisions are made.

Good planning requires asking difficult questions before an emergency occurs—not after.

We believe this study would provide valuable information to state agencies, our local government, emergency responders, and the public, while helping ensure that any future decisions are made with the benefit of a comprehensive understanding of potential transportation impacts.

Your assistance in conducting this study at the earliest practical opportunity would be greatly appreciated. Thank you for your consideration and for your continued service to the citizens of Texas.

Respectfully,



Rich Paces

Kerr County Commissioner, Precinct 2 and
President, Hill Country Energy Sub-Regional Planning Commission

cc: W. Alvin New, Acting Chair of the Texas Transportation Commission
125 E 11th St, Austin, TX 78701

Charles Benavides, TxDOT San Antonio District Engineer
4615 NW Loop 410, San Antonio, TX 78229

Clayton Ripps, TxDOT Deputy District Engineer
4615 NW Loop 410, San Antonio, TX 78229

Wes Virdell, Texas State Representative, District 53
via email

Senator Pete Flores
via email

** Note: EsVolta purchased the subject 17-acre tract of land via a subsidiary known as SOLAREIT2-A-III LLC (see Kerr Appraisal District property ID 544230).*

Attachment 2. Commissioner Briefing Package - Documented Thermal Runaway Fires and Explosions Involving Battery Energy Storage Systems Worldwide

COMMISSIONER BRIEFING PACKAGE

Documented Thermal Runaway Fires and Explosions Involving Battery Energy Storage Systems Worldwide

Assignment: CQB-2026-003

Prepared for: Kerr County Commissioner Rich Paces

Generated: 2026-07-14T21:52:12

Documented Thermal Runaway Fires and Explosions Involving Battery Energy Storage Systems (BESS) Worldwide

Evidence rule: documented facts, expert/technical guidance, engineering inferences, and unknown/disputed findings are separated.

Executive Decision Dashboard

Decision Area	Finding	Commissioner Meaning	Evidence Status
Safety posture	BESS thermal runaway can produce flammable/toxic off-gas, reignition risk, and enclosure explosion/deflagration hazards.	Kerr County should not treat a BESS fire like a normal structure or grass fire. Emergency response guide: allow the battery fire to burn itself out and protect surroundings.	Documented technical guidance: DOE, PNNL, FSRI, ERG2024
Texas exposure	ERCOT reported maximum June 2025 battery generation of 5,794 MW and 177,929 MW of proposed battery capacity in the generation interconnection queue.	BESS is now material to ERCOT operations and likely to expand in rural counties.	Documented ERCOT report
County gap	Texas SFMO guidance points to NFPA 855/UL/IFC standards but states SFMO does not itself issue BESS permits; HB 3824 adds state standards for facilities ≥ 1 MWh with COD on/after Jan. 1, 2027.	Counties need emergency-planning authority and a local checklist even where siting authority is constrained.	Documented Texas sources; implementation details require legal review
Recommended posture	Adopt evidence-based county review, emergency planning, developer-question protocol, public-notification plan, and legislative questions.	Protect public safety without making unsupported claims or blocking reliability resources categorically.	Policy recommendation / engineering inference

Scope and Evidence Limitations

Documented fact: this briefing uses the EPRI public BESS Failure Incident Database as the baseline global inventory. EPRI states the database focuses on incidents caused by BESS system/component failure with wider public health and safety impact. The inventory is necessarily limited to public reporting and changes over time. Therefore, this briefing should be updated before public release if new investigation reports are issued.

Unknown/disputed: many incident rows do not publicly disclose final root cause, battery chemistry, suppression details, property-damage dollar amount, evacuation distance, environmental sampling results, or official lessons learned. Those fields are marked unknown unless a cited report documents them.

Global Incident Inventory Summary

Documented EPRI inventory rows captured in local appendix: 175 incidents/events as of 2026-07-14 access date.

Top Countries / Regions by Public EPRI rows	Count
South Korea	70
US	42
China	27
France	8
Australia	4
UK	3
Netherlands	3
Taiwan	3
England	2
Germany	2
Japan	2
Belgium	2

Selected Significant Incidents from Full Inventory

Date	Location	MW	MWh	Module / Chemistry	Application	State	Source
16 January 2025	US, CA, Moss Landing	300	1,200	LG Energy Solution	Resource Adequacy		EPA Presentation: Moss Landing Battery Fire Response
4 September 2021	US, CA, Moss Landing	300	1,200	LG Energy Solution	Solar Integration		Vistra
20 September 2022	US, CA, Moss Landing	182.5	730	Tesla	Energy Shifting, Ancillary Services	Operational	KSBW News
13 February 2022	US, CA, Moss Landing	100	400	LG Energy Solution	Solar Integration	Operational	KSBW News
18 September 2023	US, CA, Valley Center	140	560	LG Energy Solution		Operational	Valley Road Runner
5 April 2022	US, CA, Valley Center	140	560	LG Energy Solution		Operational	Valley Road Runner
4 January 2025	South Korea, Anjwa-myeon (Anjwa Township), Shinan-gun, Jeollanam-do	96	340	LG Chem	Solar+storage		FPN
4 January 2025	South Korea, Anjwa-myeon (Anjwa Township), Shinan-gun, Jeollanam-do	96	340	LG Chem	Solar+storage		FPN

Date	Location	MW	MWh	Module / Chemistry	Application	State	Source
13 June 2024	South Korea, Baeksu-eup, Yeonggwang-gun, Jeollanam-do	100	312		Solar+storage		Energy News
13 June 2024	South Korea, Baeksu-eup, Yeonggwang-gun, Jeollanam-do	100	312		Solar+storage		Energy News
27 December 2022	South Korea, Jeollanam-do, Yeongam-gun, Geumjeong-myeon		251		Solar Integration	Operational	E2News.com
15 May 2024	US, CA, Otay Mesa	250	250	LG Chem	Energy shifting		The San Diego Union-Tribune
25 September 2023	South Korea, Shinchon-dong, Seongsan-gu, Changwon, Gyeongsangnam-do	35	175	Samsung SDI	Peak shaving BESS only		Electimes
25 September 2023	South Korea, Shinchon-dong, Seongsan-gu, Changwon, Gyeongsangnam-do	35	175	Samsung SDI	Peak shaving BESS only		Electimes
6 September 2022	South Korea, Incheon	103	103	Samsung SDI	Energy Shifting	Operational	Teller Report
10 October 2024	South Korea, Soryong-dong, Gunsan-si, Jeonbuk		102		Peak shaving		YNA
10 October 2024	South Korea, Soryong-dong, Gunsan-si, Jeonbuk		102		Peak shaving		YNA
1 October 2025	US, AZ, Peoria	25	100	NMC	Peak shaving	Operational	AZ Family
19 February 2025	England, Essex, Tilbury	300	600		Frequency Regulation, Capacity Market, Balancing Mechanism, Wholesale Power Markets	Construction	Energy Storage News
16 June 2025	South Korea, Gyeongsangbuk-do, Pohang City		62.1	Li ion	Industrial	Operational	Yonhap News Agency
12 January 2022	South Korea, Nam-gu, Ulsan	10	50	SK Innovation	Peak Load Reduction	Operational	E2News
21 January 2019	South Korea, Ulsan		46.8		Demand Charge Mgmt	Charged, inactive	MOTIE Investigation, June 2019
31 May 2023	US, NY, East Hampton	5	40	LG Chem	Resiliency, Utility Peak Reduction	Operational	East Hampton Star
26 June 2023	US, NY, Warwick	8	36	Powin Energy	Energy Shifting, Backup	Operational	Convergent Energy and Power

Date	Location	MW	MWh	Module / Chemistry	Application	State	Source
9 March 2025	South Korea, Doam-myeon, Gangjin-gun, Jeollanam-do, Seokmun-ri		35				Newsis
9 March 2025	South Korea, Doam-myeon, Gangjin-gun, Jeollanam-do, Seokmun-ri		35				Newsis
16 April 2021	China, Beijing		25	Gotion High-Tech [LFP]	Solar Integration	Construction, Commissioning	Investigation Report (English Translation)
27 June 2023	US, NY, Warwick	4	22	Powin Energy	Energy Shifting, Backup	Operational	Convergent Energy and Power
24 September 2019	South Korea, Pyeongchang		21	Samsung SDI	Wind Integration	Charged, inactive	Social construction of fire accidents in BESS in Korea
15 June 2018	South Korea, North Jeolla, Gunsan		19	Samsung SDI	Solar Integration	Charged, inactive	No Cut News

Public Safety Analysis

Hazard	Documented fact / guidance	County implication
Toxic/flammable gases	DOE identifies off-gas from damaged cells including hydrogen, carbon monoxide, carbon dioxide, hydrogen fluoride, and hydrocarbons; FSRI documented HCN and CO monitoring at McMicken.	Require air monitoring, gas detection, and public-message triggers.
Explosion/deflagration	DOE identifies hydrogen accumulation explosion risk; FSRI documents deflagration injuring firefighters after enclosure opening.	Avoid entry; require explosion-control design and incident-commander data access.
Water usage	Water may be used for exposure protection/cooling but may not stop internal cell thermal runaway already in progress.	Require water supply and runoff plan; do not promise quick extinguishment.
Burn duration/reignition	DOE states once a cell is in thermal runaway there is no way to stop the reaction and reignition is possible.	Plan for long-duration incident, reentry control, and thermal monitoring.
Evacuation distances	No universal distance is established by reviewed sources; zones must depend on site, plume, gas readings, weather, and vulnerable populations.	Adopt preplanned evacuation/shelter maps and update dynamically.
Environmental impacts	EPA's Moss Landing response demonstrates need for air/environmental monitoring and cleanup coordination.	Pre-identify TCEQ/EPA contacts, contractors, debris/firewater plan.
Groundwater risk	Risk depends on drainage, containment, battery materials, firewater use, and cleanup; do not assert contamination without sampling.	Require containment and sampling plan.

Texas Implications

Documented fact: ERCOT's July 2025 monthly report states maximum June battery generation was 5,794 MW and that battery energy storage represented the largest component of ERCOT's generation interconnection queue, with 177,929 MW among 420,381 MW of proposed generation capacity. This does not prove every queued project will be built, but it documents strong developer interest.

Documented fact: HB 3824, 89th Legislature, creates Utilities Code Chapter 187 for battery energy storage facility safety; applies to BESS facilities with capacity of one megawatt hour or greater and commercial operations date on or after January 1, 2027; requires the Commissioner of Insurance by rule to adopt fire-safety standards and testing requirements based on nationally recognized standards such as UL 9540A; and gives counties/municipalities request rights for independent evaluation reports while restricting inconsistent local regulation unless otherwise authorized.

Engineering inference: rural counties should assume that a major BESS event may exceed ordinary VFD capacity, require hazmat/air monitoring, involve long-duration defensive operations, and create public communications demands beyond ordinary fire response.

Regulatory Review

Authority/guidance	Role in BESS safety	Recommended use
Battery Energy Storage System Fire Safety	Thermal runaway, off-gas, reignition, hydrogen explosion risk, safety systems.	Federal technical source.
Battery Energy Storage System Safety Report: Design Considerations for Electric Cooperatives	Rural utility/cooperative BESS safety, thermal runaway, codes, commissioning/decommissioning.	Federal national laboratory report.
FAQ: Texas battery energy storage systems	Texas fire-safety guidance, local permitting/enforcement context, standards references.	Texas official agency guidance.
H.B. No. 3824, 89th Texas Legislature, enrolled bill text	Texas battery energy storage facility fire safety standards and emergency operations plans.	Official bill text.
ERCOT Monthly, July 2025	Texas battery generation and interconnection-queue context.	Official ERCOT source.
Understanding UL 9540A, NFPA 855 and Large-Scale Fire Testing	Difference between UL 9540 system listing and UL 9540A thermal-runaway/fire-propagation testing.	Standards organization technical guidance.
2021 International Fire Code, Chapter 12, Energy Systems / Section 1207 Electrical Energy Storage Systems	Model fire-code requirements for ESS construction documents, commissioning, decommissioning, fire protection, explosion control, and emergency planning.	Model code source.
NFPA 855: Standard for the Installation of Stationary Energy Storage Systems	Stationary ESS installation, hazard mitigation, fire protection, separation, emergency planning.	Authoritative consensus standard; full standard may require access.