Secure the Texas Grid Symposium

Overview and Key Takeaways for Kerr County

Overview

- The Secure the Texas Grid Symposium (March 19, 2025) covered three critical issues:

1) Battery Energy Storage Systems (BESS) deployment and safety
2) Renewable energy subsidies distorting the electricity market
3) Grid vulnerability to electromagnetic pulse (EMP) threats

- These issues impact Kerr County as Texas expands grid infrastructure

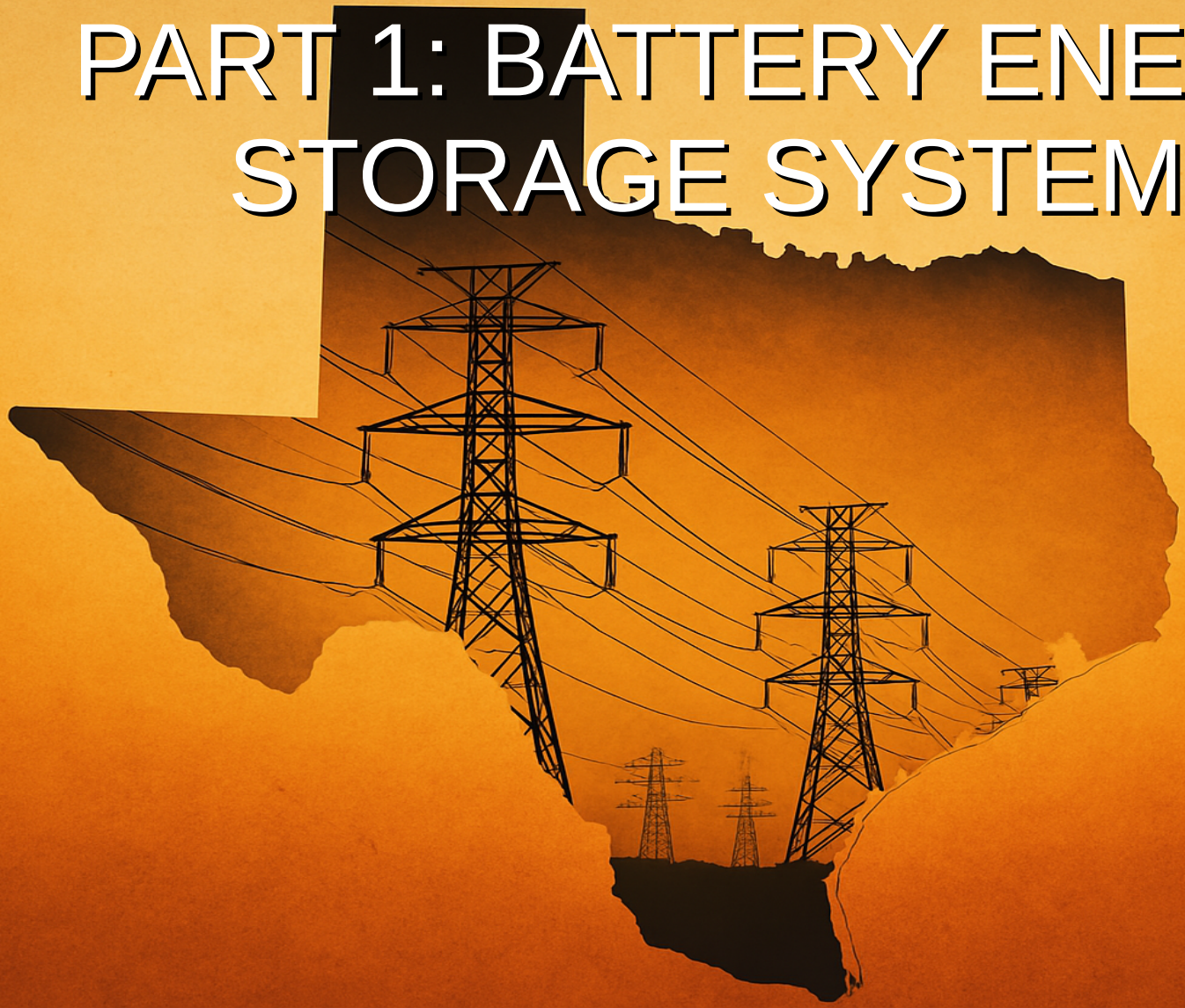
Symposium Structure

- Three panel discussions with experts, legislators, and stakeholders:
  - Unmasking the Market: How Renewable Energy Distorts Texas Energy Landscape
  - Impact of Battery Energy Storage Systems on the Grid: The Good, The Bad, and The Ugly
  - HEMP and Solar Weather Legislation Panel
- Diverse perspectives from energy policy experts, lawmakers, local officials, and affected residents

Disclaimer

- The thoughts and opinions expressed in this presentation are my own
- This presentation aims to provide an objective overview of the Secure the Texas Grid Symposium held on March 19, 2025
- I have supplemented the symposium information with additional research and documents
- My goal is to summarize complex grid security issues for our community's consideration
- No endorsement of any political position or commercial interest is intended

PART 1: BATTERY ENERGY STORAGE SYSTEMS



BESS Panel Overview

- Moderator: Nancy White (Energy Advocate)
- Panelists:
  - Cliff Williams (Van Zandt County Commissioner)
  - Rep. Wes Virdell (Texas House)
  - Chris Dyer (Local Homeowner)
  - Dwayne “Doc” Collins (Volunteer Firefighter)
  - John Miri (Founder, Electric Grid Cybersecurity Alliance)

BESS: The Good

- Fast response time: millisecond-level grid balancing services
- Crisis support: During Winter Storm Heather (2024), batteries helped avoid grid failure and saved $750 million in costs
- Peak load relief: In summer 2023, batteries contributed 2,172 MW (power to ~434,000 homes)
- Renewable integration: Storing excess wind/solar power

BESS: The Bad (Economic & Operational Issues)

- Market distortions: BESS deployment driven by subsidies, not genuine market needs
- Operational limitations: Most systems provide energy for only 2-4 hours
- Property impacts: Chris Dyer’s story - BESS facility installed just 10 yards from his property line
- Environmental concerns: Soil/water contamination risks, habitat destruction
- Transparency failures: Developers often not required to notify nearby property owners

BESS: The Ugly (Safety Hazards)

- Thermal runaway risk: Chain reaction of overheating and fire that’s difficult to contain
- Fire response challenges: Fires can burn for days, emit toxic smoke, reignite multiple times
- Unprepared first responders: Local volunteer fire departments lack equipment and training
- Missing safety systems: Some facilities constructed without fire suppression systems

BESS: Regulatory Loopholes

- All BESS installations are legally required to follow NFPA and UL safety standards:
  - NFPA 855: National standard for fire safety in BESS installations
  - UL 9540 & UL 1973: Certification standards for system-level and component-level battery safety
- However, developers actively exploit gaps in enforcement:
  - Choosing unincorporated areas with limited permitting authority
  - Skipping fire suppression systems as “optional”
  - Misapplying standards (e.g., NFPA 68 Section 1.3.3)

BESS: Cybersecurity Concerns

- John Miri warned that BESS are effectively “internet-connected power plants”:
  - Many use insecure control systems lacking strong authentication
  - Cyberattacks could disable cooling systems or manipulate grid frequency
  - Foreign-supplied components may introduce vulnerabilities
  - Texas should treat BESS as critical infrastructure requiring rigorous cybersecurity governance

County Case Study: Van Zandt

- 100 MW BESS facility proposed without public input
- Triggered massive community backlash and lawsuits from 20 landowners
- Developer admitted choosing the site because the county “lacked permitting authority”
- Stated in public meeting: “You can’t tell us what to do” regarding fire suppression
- Nearest volunteer fire department has only five members and limited equipment

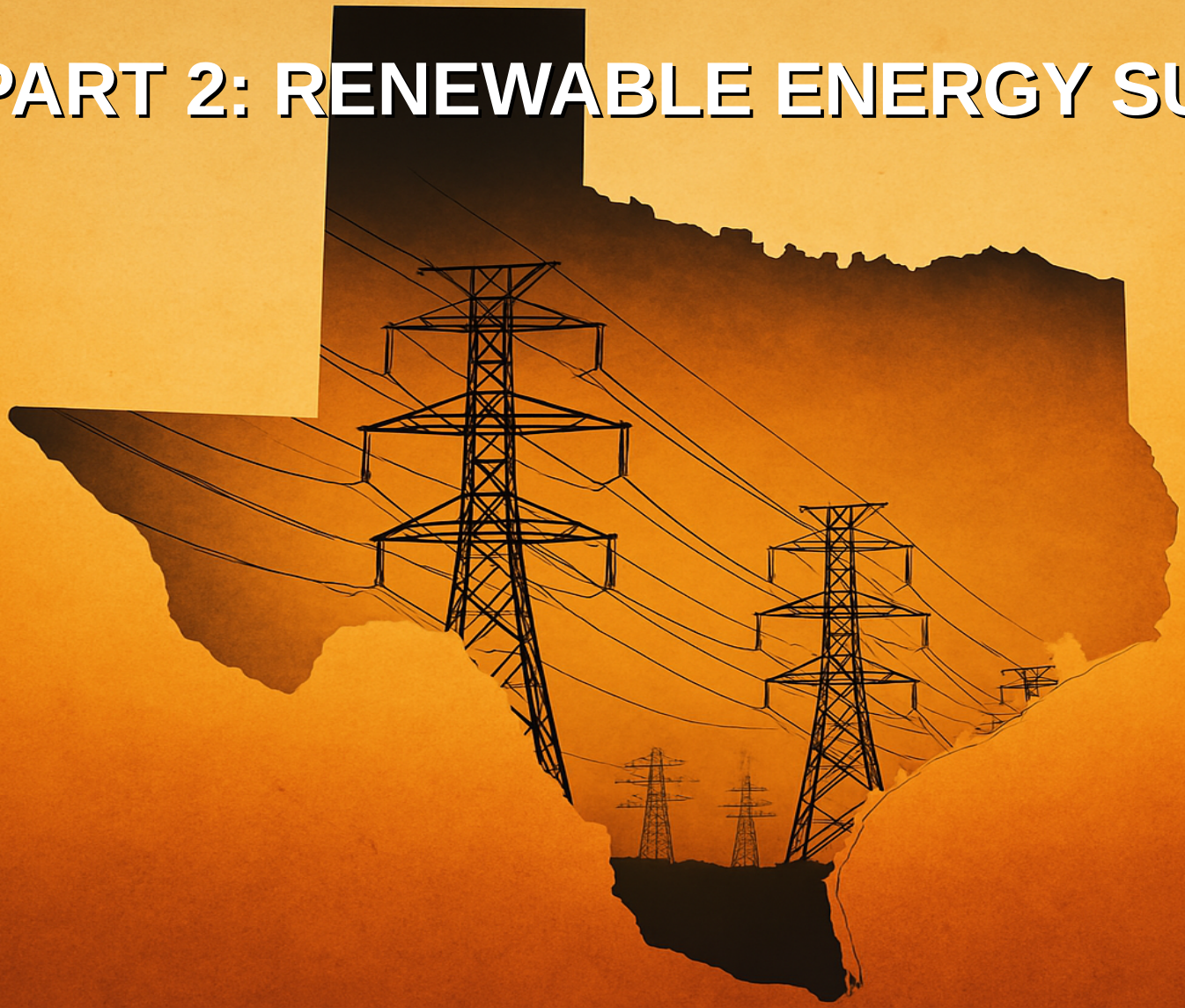
Van Zandt County: Legal and Safety Responses

- County Criminal District Attorney's Office initiated investigation of BESS project
- State Fire Marshal confirmed all BESS installations must follow NFPA safety standards
  - Fire Marshal ruled developer cannot bypass fire safety requirements, even in unincorporated areas
- County exploring legal pathways to enforce safety standards and protect residents
- County Judge and Commissioners issued formal requests for compliance documentation

Implications for Kerr County

- As BESS deployment expands across Texas, Kerr County faces similar developments
- Rural counties are often targeted due to perception of limited regulatory oversight
- County officials can request State Fire Marshal determinations on safety requirements
- Criminal District Attorney or County Attorney may have jurisdiction on safety compliance issues
- Important to be proactive rather than reactive
- Volunteer fire departments need proper training and equipment if BESS facilities are built

PART 2: RENEWABLE ENERGY SUBSIDIES



Renewable Energy Panel Overview

- Moderator: Bill Peacock
- Panelists:
  - Dr. Brent Bennett (Texas Public Policy Foundation)
  - Sen. Kevin Sparks
  - Rep. Brent Money

Key Findings: Market Distortion

- Texas has seen explosive growth in wind and solar due to $19.4 billion in subsidies (2006-2019)
- 92% of all new grid capacity additions in recent years have been wind, solar, or battery
- Subsidies allow wind producers to bid at negative prices, crowding out dispatchable generators
- Renewable operators heavily dependent on subsidies (28% of revenue for some providers in 2018)

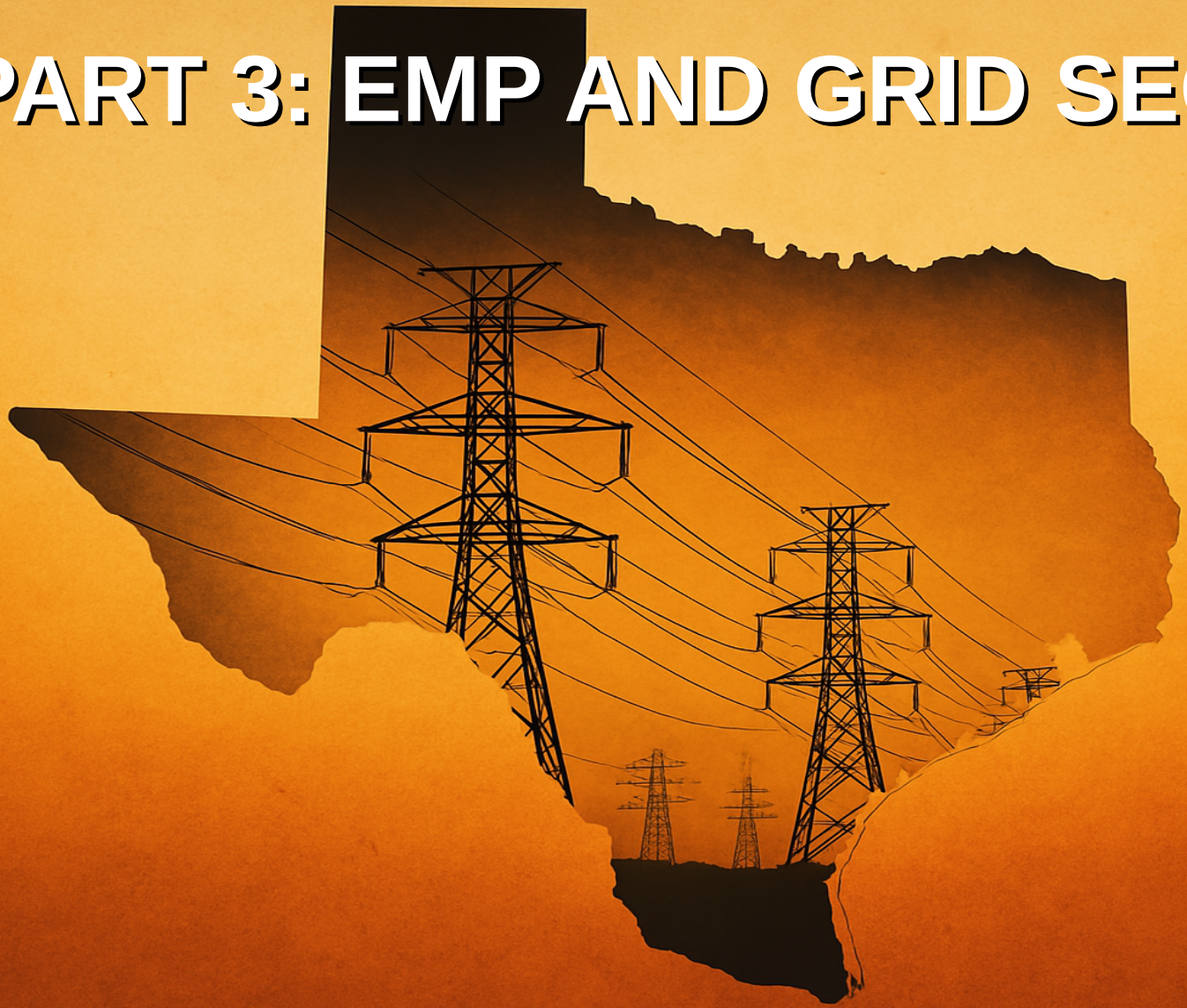
Consequences of Market Distortion

- Displacement of reliable energy: Coal retirements and delayed natural gas builds
- Growing reliability gap: As demand increases, dispatchable energy hasn’t kept pace
- Costly interventions: Market interventions like the Operating Reserve Demand Curve (ORDC) cost Texans an estimated $11 billion from 2019-2022
- Dependency cycle: Texas Energy Fund ($5 billion) created to support new gas generation to fix problems caused by earlier subsidies

The BESS Connection

- Battery storage deployment is directly linked to renewable subsidies
- Federal IRA incentives triggered over 4 GW of battery buildout in 2024 alone
- BESS is a costly attempt to compensate for renewables' intermittency
- Panel called BESS a "band-aid" introducing new risks without addressing the grid's underlying reliability crisis

PART 3: EMP AND GRID SECURITY



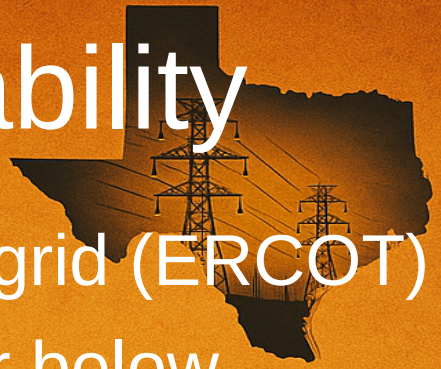
EMP Panel Overview

- Moderator: Chuck DeVore (Texas Public Policy Foundation)
- Panelists:
  - Don Brown (Secure the Grid Coalition)
  - Senator Bob Hall (R-Edgewood)
  - David Tice (Filmmaker, “Grid Down, Power Up”)

Understanding EMP Threats

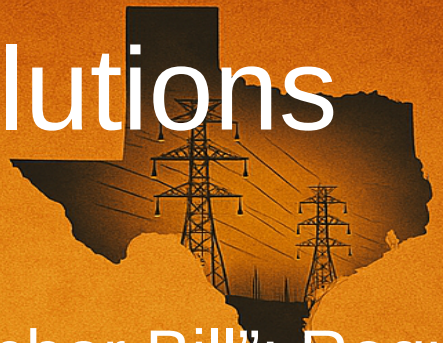
- E1 Pulse (nuclear EMPs): Fast electromagnetic shock that can instantly destroy grid control systems
- E3 Pulse (solar storms): Slower pulse inducing currents in transmission lines that can melt transformer cores
- Historical examples: 1859 Carrington Event and 1921 Railroad Storm
  - A repeat today could cripple modern infrastructure
  - Dodged catastrophe in July 2012

Texas Grid Vulnerability



- Texas operates a largely independent grid (ERCOT)
- Current NERC standards (~8 V/km) far below Department of Defense recommended protection levels (85 V/km for E3)
- Large Power Transformers (LPTs) are especially at risk with 4-6 year replacement times
- Without protection, a severe solar storm or EMP attack could cause catastrophic, long-term outages

Texas Legislative Solutions

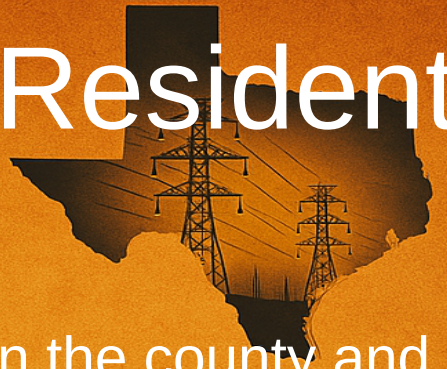


- For BESS Safety:
  - HB 1378 (Rep. Virdell) – “Good Neighbor Bill”: Requires 500-yard setback from property lines
  - HB 1343 (Rep. Troxclair): Introduces statewide permitting and spacing rules
  - HB 4363 (Rep. Money): Requires fire code compliance and developer-funded firefighter training
  - HB 5454 (Rep. Money): Expands county commissioner authority over industrial energy projects

Texas Legislative Solutions (continued)

- For Market Distortion:
  - SB 714 (Sen. Sparks): Directs ERCOT and PUC to compensate for or eliminate market distortions
  - HB 3017 (Rep. Money): Imposes a Texas tax equal to the value of federal subsidies received
- For EMP Protection:
  - SB 1740 (Sen. Parker): Aligns Texas grid protection standards with DOD levels and establishes a grant program
  - SB 75/HB 941 (Sen. Hall/Rep. Cain): Creates the Texas Grid Security Commission

Actions for Kerr County Residents



- Track developments: Monitor BESS proposals in the county and speak up early
- Push for local standards: Advocate for NFPA 855 adoption at county level
- Support legislation: Contact representatives about key bills
- Demand accountability: Insist on certifications, public meetings, and hazard disclosures
- Prepare first responders: Ensure local firefighters have proper training and resources
- Support your County Commissioners and the 391 Commission

Conclusion

- BESS installations present significant risks without proper regulation and oversight
- Renewable subsidies have created market imbalances affecting grid reliability
- EMP threats represent a less immediate but potentially catastrophic risk
- County-level engagement is critical – Van Zandt County’s experience shows what happens when local officials are caught unprepared
- Kerr County can learn from these lessons to protect residents and ensure responsible energy development

Questions?