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**THE US DEPARTMENT OF ENERGY ENERGY STORAGE SAFETY
STRATEGIC PLAN AND THE CORBY STAFF ASSESSMENT'S
TREATMENT OF BESS SAFETY, EM**

Additional submitted attachment is included below.

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the Matter of:

Corby Battery Energy Storage System Project

Docket No. 24-OPT-05

**COMMUNITY COMMENTS REGARDING THE U.S. DEPARTMENT OF ENERGY
ENERGY STORAGE SAFETY STRATEGIC PLAN AND THE CORBY STAFF
ASSESSMENT'S
TREATMENT OF BESS SAFETY, EMERGENCY RESPONSE, TOXIC EMISSIONS,
AND INCIDENT PREPAREDNESS**

Submitted by Iris Santos

September 10, 2026

I. Why I Am Submitting These Comments

I live in Vacaville with my two minor children, and I am very concerned about this Project. These comments address the U.S. Department of Energy (DOE) Energy Storage Safety Strategic Plan, updated in 2024, and ask whether the Corby Staff Assessment/Draft EIR adequately addresses the safety and incident-response issues that DOE identifies as continuing priorities and gaps for utility-scale energy storage. It is especially troubling that important plans are being deferred until after Project approval.

I am not citing the DOE Strategic Plan as a binding siting regulation or as a substitute for CEQA. Its importance is that it is a federal technical publication describing the current state of energy-storage safety, lessons learned from deployed systems, and areas where additional science, coordination, standards, and emergency-response capability remain necessary. DOE organizes energy-storage safety around three separate pillars: science-based safety validation; incident preparedness and response; and codes and standards.

That framework matters here because compliance with NFPA 855, the California Fire Code, UL testing requirements, or other generally applicable standards does not necessarily resolve the separate concerns DOE identifies regarding toxic emissions, plume direction, runoff, exclusion zones, emergency-response coordination, responder situational awareness, prolonged incidents, and response protocols specific to utility-scale systems.

II. Thermal Runaway Remains the Central Lithium-Ion Safety Concern Identified by DOE

DOE identifies thermal runaway as the primary safety concern for lithium-ion batteries and explains that battery failures can lead to fire, explosion, toxic emissions, stranded energy, and prolonged or intermittent hazards. DOE's responder guidance further warns that the absence of visible flame or smoke does not establish that an event has ended and that flaming and off-gassing may recur over minutes, hours, or days. (DOE Strategic Plan, pp. 7, 47.)

The Corby Staff Assessment acknowledges thermal runaway and evaluates fire and public-health consequences. My concern is whether the analysis follows the hazard through the full course of an incident: initial failure, propagation potential, toxic release, prolonged or intermittent off-gassing, responder exclusion, plume monitoring, possible re-ignition, runoff, post-incident sampling, stranded energy, and re-entry.

Where does the Staff Assessment evaluate the resources and procedures required if an apparently stabilized Corby battery enclosure continues or resumes off-gassing over hours or days? What duration was assumed for staffing, respiratory protection, air monitoring, mutual aid, site security, public notification, and environmental monitoring?

III. Codes and Standards Are Only One Part of DOE's Three-Pillar Safety Framework

This DOE framework is particularly important when considering the Staff Assessment's reliance on NFPA 855 and related codes. DOE does not equate compliance with codes and standards with complete safety validation. Codes and standards are only one pillar, alongside science-based validation and incident preparedness and response. (DOE Strategic Plan, pp. 7-8, 42.)

The Corby record discusses NFPA 855, the California Fire Code, UL testing, battery-management systems, fire protection, and proposed Conditions of Certification in detail. Those measures matter. The separate question is where Staff demonstrates that Corby's site-specific incident preparedness and response are sufficient for the actual setting and the offsite receptors surrounding this Project.

What portions of Staff's less-than-significant conclusions depend on code compliance, and what portions depend on independent site-specific evidence? Where does Staff identify the limits of what NFPA 855, UL testing, and fire-code compliance actually establish about offsite toxic exposure, exclusion zones, emergency-resource sufficiency, and neighboring residential and agricultural receptors?

IV. DOE Continues to Identify Emergency-Response Coordination as a Gap

DOE states that emergency-response coordination remains an area requiring improvement and notes that there is still no standard template guiding owners through an emergency-response plan containing all key elements and stakeholders. DOE also expressly recognizes that a residential ESS and a utility-scale ESS require different emergency-response protocols. (DOE Strategic Plan, pp. 38-39.)

This concern applies directly to Corby. The record contemplates completing the Emergency Response Plan before energization, providing additional first-responder training, and conducting joint exercises. Earlier County comments identified the previously submitted emergency plan as incomplete. CEC/fire-department coordination also identified unresolved issues involving water flow, toxic gases, local winds, Project-personnel response, training, and exercises.

Has Staff demonstrated that the Corby-specific emergency-response system is presently complete and operationally validated, or does the Staff Assessment rely on the expectation that material elements will be completed after certification? Which agencies have approved the final plan? What full-scale exercises have been conducted? What deficiencies were identified and corrected?

V. DOE Identifies Toxic Emissions as an Area Where More Knowledge Is Still Needed

DOE states that the impact of toxic emissions from battery fires is critical to incident-response strategy and public-safety protection. It notes ongoing work concerning heavy metals in airborne particulate emissions and water runoff and states that, as outdoor battery incidents trend toward defensive response, greater knowledge of toxic emissions is needed to understand the long-term impacts of that approach. (DOE Strategic Plan, pp. 39-40.)

This is directly relevant because Staff evaluates toxic releases from a possible BESS incident and the Project's emergency strategy includes defensive response elements. Staff's Public Health analysis reportedly identifies possible AEGL-1 effects at receptors extending well beyond the immediate battery equipment area under a worst-case scenario. (Staff Assessment, Public Health, including p. 5.10-18.)

How did Staff reconcile its toxic-plume results with DOE's recognition that toxic-emissions knowledge remains an important gap for defensive outdoor BESS response? Does Staff's conclusion depend upon an assumption that allowing an affected enclosure to burn is itself protective, or does Staff independently evaluate the offsite consequences of the emissions produced by that strategy?

What pollutants were modeled and which were not? How were particulate-bound metals, hydrogen fluoride, other combustion products, and changing battery state-of-charge or chemistry addressed? What evidence establishes that the modeled constituents and assumptions adequately represent the potential emissions relevant to nearby residences and agricultural property?

VI. DOE Says Plume Direction and Runoff Containment Must Be Considered During an Incident

DOE states that the decision between defensive and offensive response depends on the incident and location, and specifically identifies smoke-plume direction and runoff containment as incident-management considerations. DOE further states that HAZMAT monitoring of runoff and airborne emissions may be required and that resources should be requested early in an incident. (DOE Strategic Plan, p. 34.)

Those points closely match unresolved questions for Corby. Who will conduct real-time offsite air monitoring? What instruments are immediately available? What constituents can they measure? Where will monitoring occur as wind directions change? Who interprets the data? What thresholds trigger evacuation, shelter-in-place, expansion of an exclusion zone, or re-entry? Will baselines be obtained for soil and underground water?

Similarly, who monitors runoff during an incident? What pathways could carry contaminated water to agricultural property, drainage features, SID facilities or canals, or groundwater? What containment capacity exists, and what happens if the volume exceeds that capacity? Which agency or Project entity has the equipment and authority to sample, contain, remove, treat, and dispose of contaminated water and soil?

VII. DOE Identifies Exclusion Zones, Air/Water Pollutant Levels, and Spill Containment as Areas for Further Standards

A particularly important part of the DOE Strategic Plan appears in its discussion of future codes and standards. DOE states that research on toxic emissions should lead to new emergency-response standards addressing issues such as exclusion zones, acceptable pollutant concentrations in air and water, and spill containment when the fire strategy is to allow the container to burn. (DOE Strategic Plan, p. 41.)

That is significant because equipment-separation requirements and general fire-code compliance do not necessarily answer the question of effects on offsite receptors. If the Corby response strategy permits an affected enclosure to burn while responders remain at a safe distance, what Corby-specific exclusion zone has Staff determined is necessary? What standard or evidence establishes its radius?

What concentrations of pollutants in ambient air and water does Staff consider acceptable during and after a Corby incident? How do those criteria relate to the AEGL thresholds used in Appendix D and the Public Health analysis? If DOE identifies these matters as areas still requiring development of emergency-response standards, what independent site-specific evidence did Staff use to resolve them for Corby?

VIII. DOE Emphasizes Real-Time System Information for Emergency Responders

DOE states that emergency responders need physical status indicators from stationary ESS during incidents, including battery-management-system information showing temperatures and gas levels. It emphasizes that gas levels are important to understanding explosion risk and that responders should be able to access status information from outside a suitable exclusion zone. (DOE Strategic Plan, p. 39.)

What Corby BMS and gas-sensor information will be available to Dixon, Vacaville, and other responders in real time? Can responders access that information remotely before entering the site? Who maintains access credentials? What happens if communications or SCADA are lost? What battery enclosure data remain available during loss of normal power?

The Project is expected to be unstaffed during normal operation and controlled from an offsite control room. That raises practical questions about what information the offsite operator will provide to incident command, how quickly it will be provided, what qualified Project personnel will be physically available, and what enforceable response time applies.

IX. Prolonged Events Raise Practical Questions About Water, Staffing, and Mutual Aid

DOE warns that flaming and off-gassing may recur intermittently over minutes, hours, or days. That has practical consequences for Corby's emergency-response analysis. The Staff record already reflects disagreement concerning the proposed 24,000-gallon water supply and flow rates discussed by the Applicant and Dixon Fire.

Resources that are sufficient for the first phase of an incident may not be sufficient for a prolonged event. A water tank, staffing plan, SCBA cache, monitoring program, or mutual-aid arrangement must be considered in that context. What incident duration did Staff use when evaluating these resources? What is the operational plan if monitoring and perimeter protection are needed overnight or for multiple days?

How many staffing rotations can be supported? How will ordinary fire and EMS coverage be maintained elsewhere? What respiratory-protection resupply and decontamination capability is available? What mutual-aid resources are committed rather than merely potentially available?

X. Corby's 300 MW / 1,200 MWh Scale Makes DOE's Utility-Scale Distinction Important

DOE expressly states that different energy-storage applications require different emergency-response protocols, specifically noting that residential systems differ from utility-scale systems. Corby is proposed as a 300 MW / 1,200 MWh utility-scale facility.

How did Staff account for the scale of Corby when determining emergency-response capability? Which testing or incident data used by Staff are directly representative of a facility of this scale and configuration? Where Staff relies on module-, unit-, or container-level testing, how did Staff determine that the evidence adequately represents site-level consequences involving hundreds of units, common infrastructure, simultaneous exposures, wind-driven emissions, and a prolonged emergency?

Does the Staff Assessment identify any credible multi-unit or cascading scenario? If such a scenario was excluded, what evidence supports that exclusion?

XI. DOE Safety Priorities Compared With the Corby Staff Assessment

DOE issue	Corby Staff Assessment treatment	Remaining record question
Science-based safety validation	Staff discusses UL testing, thermal runaway, modeling, and battery safety.	What site-level validation demonstrates that unit-level testing adequately predicts Corby's offsite consequences under actual site conditions?
Incident preparedness and response	Staff proposes emergency planning, training, fire-department coordination, and Conditions of Certification.	Which Corby-specific capabilities are complete now, and which depend on future plans, training, exercises, equipment, or agreements?
Toxic emissions	Staff models selected fire emissions and public-health endpoints.	How does Staff address DOE's identified knowledge gaps for toxic emissions from defensive outdoor BESS response?
Plume direction	Staff performs dispersion analysis.	How are actual local wind conditions translated into operational plume monitoring, exclusion-zone, evacuation, and shelter-in-place decisions?
Runoff containment	Staff addresses water/soil issues and proposed fire response.	What incident-specific runoff monitoring, containment volume, sampling, and disposal capability exists?
Exclusion zones	Staff includes responder-safety and emergency-planning measures.	What Corby-specific exclusion-zone distance is supported by the toxic-plume analysis and what standard establishes it?

Air/water pollutant thresholds	Staff uses public-health criteria including AEGLs.	What criteria govern real-time emergency decisions and post-incident re-entry, and how do they correspond to modeled endpoints?
Emergency-response coordination	Staff coordinated with Dixon and other responders and proposes training/exercises.	What final coordinated ERP and validated multi-agency response structure existed when Staff reached its conclusions?
Physical status indicators	Project includes BMS/SCADA and monitoring.	What real-time temperature/gas/status information can responders access outside the exclusion zone during an incident?
Prolonged/intermittent incidents	Staff addresses emergency response and fire protection.	What duration did Staff assume for staffing, SCBA, monitoring, water, mutual aid, perimeter control, and public protection?

XII. Questions for the Administrative Record

1. Did Staff consider the 2024 DOE Energy Storage Safety Strategic Plan in evaluating Corby? If so, where is that consideration disclosed?
2. If Staff did not consider it, what technical authority did Staff use to address the incident-response and safety gaps identified by DOE?
3. How does Staff's analysis address DOE's three distinct safety pillars rather than treating code compliance as a substitute for science-based validation and incident preparedness?
4. What duration of thermal runaway, intermittent off-gassing, or re-ignition did Staff assume?
5. What resources are available if monitoring and emergency operations continue for hours or days?
6. How did Staff address DOE's finding that additional knowledge is needed concerning toxic emissions from defensive outdoor BESS incidents?
7. What Corby-specific exclusion zone is supported by Staff's plume modeling and responder-safety analysis?
8. What air and water pollutant concentrations govern evacuation, shelter-in-place, responder entry, and public re-entry?
9. Who possesses the equipment necessary for real-time airborne-emission and runoff monitoring, and how quickly can those resources be deployed?
10. How are local wind speed and direction incorporated into real-time incident decisions rather than only pre-project dispersion modeling?
11. What runoff volume and contaminant loading were assumed for a prolonged Corby incident?
12. What containment exists if incident water exceeds onsite capacity or reaches offsite drainage pathways?
13. What real-time BMS, temperature, and gas data will responders receive from outside the exclusion zone?
14. What happens to responder situational awareness if SCADA, communications, or normal power are lost?
15. What evidence demonstrates that Dixon, Vacaville, and mutual-aid agencies have the utility-scale BESS-specific training and equipment necessary for the hazards identified by DOE?

16. What full-scale multi-agency exercise has validated the Corby ERP against plume, evacuation, HAZMAT monitoring, prolonged operations, and runoff scenarios?
17. What deficiencies identified during such an exercise were resolved before Staff reached its environmental conclusions?
18. How did Staff account for Corby's 300 MW / 1,200 MWh scale when extrapolating from unit- or container-level tests?
19. What credible multi-unit or cascading incident scenarios were considered, and what evidence supports excluding any such scenario?
20. Which Staff conclusions depend on measures that will not be finalized, trained, exercised, funded, or implemented until after certification?
21. How does Staff distinguish between reducing risk through engineering controls and avoiding exposure through siting at a less sensitive location?
22. If the same modern safety standards would apply at Lambie Industrial Park, what site-specific evidence supports imposing the remaining emergency-response and offsite-exposure risks on existing rural residential and agricultural receptors at the proposed site?

XIII. Conclusion

The DOE Energy Storage Safety Strategic Plan does not establish that Corby is unsafe, and it is not a binding California siting standard. It does, however, provide an important federal technical benchmark for evaluating whether a utility-scale BESS safety analysis goes beyond equipment-code compliance and addresses science-based validation, incident preparedness, toxic emissions, responder situational awareness, prolonged events, exclusion zones, plume direction, runoff, and post-incident conditions.

The Corby Staff Assessment addresses many of these subjects. The unresolved question is whether those issues are supported by site-specific evidence or whether material conclusions instead depend on generally applicable standards, unit-level testing, Applicant assumptions, and plans or capabilities that will only be completed after certification.

DOE's identification of continuing gaps is especially important where Corby's response strategy relies on defensive management of an outdoor lithium-ion BESS incident. DOE specifically identifies toxic emissions, plume direction, runoff monitoring, exclusion zones, acceptable air and water pollutant concentrations, emergency-response coordination, and utility-scale-specific protocols as matters that continue to require attention.

For the administrative record, it should therefore be clear what evidence Staff used to resolve those issues for Corby, what remains uncertain, and which conclusions depend on future actions rather than presently demonstrated capability. That distinction matters where the proposed facility would be located next to existing rural residential and agricultural property and an industrial-location alternative has been identified.

Authorities and Record References

- U.S. Department of Energy, Office of Electricity, Energy Storage Safety Strategic Plan (2024), especially pp. 7-8, 34, 38-42, and 47.
- California Energy Commission, Corby Battery Energy Storage System Project Staff Assessment / Draft EIR, TN 271468 (July 15, 2026), including Public Health, Worker Safety and Fire Protection, Soil and Water, and Appendix D.
- Corby Data Request Responses Set #2, Part 1, TN 263281 (May 23, 2025).
- Corby Data Request Response #3, TN 265885 (2025), including proposed Conditions of Certification concerning emergency planning and responder training.
- County of Solano, Scoping Comments for Corby BESS Project, TN 267642 (Nov. 19, 2025), including emergency response, water supply, evacuation, air monitoring, runoff containment, and ERAP concerns.
- NFPA 855, Standard for the Installation of Stationary Energy Storage Systems.
- California Fire Code provisions applicable to energy storage systems.