

DOCKETED	
Docket Number:	24-OPT-05
Project Title:	Corby Battery Energy Storage System Project
TN #:	272556
Document Title:	Robin Jaeckel Comments - Opposition to Corby Battery Energy Storage System Project
Description:	N/A
Filer:	System
Organization:	Robin Jaeckel
Submitter Role:	Public
Submission Date:	9/11/2026 7:40:08 AM
Docketed Date:	9/11/2026

Comment Received From: Robin Jaeckel
Submitted On: 9/11/2026
Docket Number: 24-OPT-05

Opposition to Corby Battery Energy Storage System Project

Additional submitted attachment is included below.

To the Honorable siting Commissioners:

This opposition statement is submitted regarding Section 5.9 (Noise and Vibration) of the Staff Assessment for the proposed Corby Battery Energy Storage System (BESS) Project.

While the Staff Assessment concludes that operational noise and vibration impacts would be less than significant with mitigation incorporated, it relies on outdated assessment frameworks that entirely fail to account for low-frequency vibrational noise pollution—a critical risk factor explicitly documented in the recent 2025 study by Chehaimi et al.

The proposed project introduces a massive industrial footprint into a sensitive rural agricultural area, featuring up to 341 BESS enclosures, 114 inverters, and three generator step-up transformers at full build-out. These components will operate continuously to support a 300-megawatt grid connection. The Staff Assessment erroneously treats this facility's noise output through a standard acoustic lens, overlooking the pervasive, long-range propagation of low-frequency hums and subterranean structural vibrations inherent to large-scale electrical inversion and transformer operations.

As established by Chehaimi et al. (2025), low-frequency vibrational noise pollution from utility-scale energy infrastructure creates chronic environmental stressors that standard local ordinances and decibel-weighted (dBA) metrics fail to measure or mitigate. Low-frequency ground-borne vibrations travel significantly farther than high-frequency sound, penetrating structural foundations of nearby rural residences along Kilkenny and Byrnes Roads. This creates a secondary acoustic effect inside homes, where walls and windows act as structural speakers, amplifying low-frequency rumbles.

Furthermore, this vibrational pollution poses an unmitigated risk to local agriculture and ecology. The project site is surrounded by active orchards and agricultural lands. Peer-reviewed research, including Xiao et al. (2016) and Paudel et al. (2015), rigorously documents that pollinator populations—essential to the viability of Solano County orchards—are highly sensitive to environmental and acoustic disturbances. Continuous low-frequency seismic and acoustic hums from over a hundred collocated inverters can disrupt the behavioral patterns, communication, and foraging efficiency of native pollinators and managed honey bees, accelerating local population declines and threatening regional crop yields. Almond orchards surround the proposed site. Almonds in Solano County, are the #1 agricultural commodity by gross value. Generating \$108 million in overall crop value across 23,700 tons produced.

According to Dr. Nino, PhD.

Professor of Cooperative Extension for Agriculture Department of Entomology and Nematology, University of California, Davis Ca. "I think it is really important to highlight that in addition to continued loss of flowering food resources for pollinators due to habitat loss, about 70% of our bees are ground nesting, so loss of clear ground for them to dig into can severely impact their ability to reproduce."

The noise complaint process and operational noise surveys proposed in the Conditions of Certifications (COCs) are reactionary measures that do not protect the community or the ecosystem from the irreversible onset of low-frequency vibrational pollution.

The current environmental analysis is deficient under CECA because it fails to evaluate the distinct impacts of low-frequency vibrational noise on human health and agricultural pollinators.

I have Questions:

1. Low-Frequency Noise & Acoustic Disturbance BESS facilities use industrial-scale HVAC/chiller systems, Power Conversion System (PCS) inverters, and transformers that run continuous cooling fans and generate hums at 60 Hz/120 Hz and higher harmonics. Bees communicate in the hive via specific body vibrations (“dance communication”) and are highly sensitive to low-frequency ground and air vibration.

Acoustic Modeling: “Has the biological impact analysis evaluated continuous low-frequency noise (100 Hz-500 Hz) and equipment-induced ground vibrations specifically on neighboring honeybee hives and wild ground-nesting pollinators, rather than using standard human-weighted dBA scales?”

Vibrational Disruption: “What studies or field data have been provided to demonstrate that low-frequency hums from inverters and continuous HVAC chilling units will not disrupt bee dance communication, orientation, or hive stability in nearby orchards/fields?”

Mitigation Requirements: “Will the CEC mandate low-frequency sound wall barriers, acoustic dampening enclosures, or minimum setback distances specifically designed to protect agricultural pollinator activities on adjacent parcels?”

2. Electromagnetic Fields (EMF) & Navigation. Bees rely on natural magnetoreception (tiny particles of magnetite in their abdomen) to navigate between hives and flowering crops. High-voltage collector substations, gen-tie lines, and large battery arrays emit localized electromagnetic fields.

Navigational Interferences: “What potential impacts will localized electromagnetic fields (EMF) generated by the facility’s high-voltage transformers and gen-tie connection lines have on bee navigation, foraging efficiency, and return-to-hive success rates?”

Field Mapping: “Does the CEC require a spatial mapping of expected EMF output at the facility boundary to ensure magnetic fields do not cross into adjacent commercial apiary placements or active bloom areas?”

3. Microclimate Alteration & Thermal Disruption Industrial battery enclosures reject significant amounts of heat via forced-air cooling systems, creating localized microclimates or thermal plumes.

Thermal Plumes: “How far outside the project footprint will exhaust heat from HVAC and liquid-cooling chillers alter local microclimates (temperature, humidity, and airflow), and could this localized heat plume alter bee foraging schedules or flowering times along the property border?”

4. Pesticide Vector & Dust Risks During Construction During site preparation and grading, dust suppressants or heavy soil-nesting bees, or active hives.

Ground-Nesting Pollinators: “Has the CEC surveyed the project perimeter for native ground-nesting bees (such as alkali or bumblebees), and what construction dust-mitigation protocols will protect adjacent active blooms during peak pollination seasons?”

Herbicide/Vegetation Management: “What specific vegetation management plan will be mandated for inside the BESS perimeter? Will chemical herbicides be restricted to prevent chemical drift onto neighboring pollinator-dependent crops?”

5. Biological Review & Agricultural Baseline Under environmental reviews (such as CEQA/AB 205 processes), biological assessments must evaluate agricultural land uses and adjacent natural habitats.

Crop Pollination Baseline: “Did the biological resources baseline assessment account for the commercial value and seasonal timing of bee-pollinated crops (e.g., almonds, sunflowers, seed crops) operating on surrounding parcels?”

Monitoring & Recourse: “What post-construction biological monitoring framework will be established, and what recourse mitigation mechanism exists for neighboring agricultural operators if yield loss due to bee disturbance is demonstrated after facility energization?”

Lambie Industrial Park is the best location for this project.

Thank you for your time and serious considerations of these local impacts.

Respectfully submitted,

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