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*Comment Received From: John Rayfield*  
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*Docket Number: 24-OPT-05*

## **Critical Concerns Over Corby BESS Risks**

California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Subject: Opposition to the Proposed Corby Battery Energy Storage System (BESS) in Solano County

Dear Commissioners,

I am writing to express my deep concerns and opposition regarding the proposed Corby Battery Energy Storage System (BESS) in Solano County. While I acknowledge the importance of renewable energy infrastructure to achieve California's climate goals, the risks associated with this facility's proposed location are substantial. Using established scientific data and real-world incidents as a basis, I urge the California Public Utilities Commission (CPUC) to reconsider approving this project in its current configuration and location.

### **1. Fire Hazards and Toxic Emissions**

Lithium-ion batteries, the most likely technology for the Corby BESS, are prone to thermal runaway, a phenomenon in which overheating spreads uncontrollably between battery cells, causing fires and explosions. A single incident at a facility this size could result in catastrophic consequences:

#### **Fire Risks:**

Thermal runaway events can reach temperatures exceeding 1,000°F (537°C), as documented in studies by the National Fire Protection Association. Fires in battery storage facilities are notoriously difficult to suppress, with some incidents, such as the 2021 Tesla Megapack fire in Australia, requiring over 72 hours to control.

#### **Toxic Emissions:**

Fires involving lithium-ion batteries release hazardous gases, including hydrogen fluoride (HF), carbon monoxide, and volatile organic compounds. Hydrogen fluoride, in particular, poses severe health risks even at low concentrations (30 ppm), as noted by the National Institute for Occupational Safety and Health (NIOSH). Such gases can disperse over miles, exposing tens of thousands of residents to respiratory and chemical hazards.

#### **Scientific Reference:**

A report published in Fire Technology Journal highlights that large-scale lithium-ion battery fires can produce dense toxic plumes, requiring evacuations within a 1-5 mile

radius, depending on wind conditions.

## 2. Scale of the Facility and Fire Impact

The Corby BESS, with a storage capacity of 1,200 megawatt-hours (MWh) and an estimated battery weight of 17.6 million pounds, represents an unprecedented risk:

### Energy Released in a Full Fire Event:

Lithium-ion batteries release approximately 0.75 MJ per kilogram during combustion. A complete facility fire would generate an estimated 6,000,000 MJ of energy, producing extreme heat, repeated explosions, and widespread toxic emissions.

### Burn Duration:

Based on documented incidents and fire simulations, such a fire could last between 12 to 72 hours, necessitating large-scale emergency responses, road closures, and evacuations.

## 3. Risks to Public Safety and Infrastructure

The Corby BESS's proximity to major residential areas and critical transportation arteries like Interstate 80 (AADT: ~149,000 vehicles) and Interstate 505 (AADT: ~36,000 vehicles) exacerbates its potential impact:

### Evacuation Radius:

With an estimated 117,000 residents within a 5-mile radius, a fire could trigger mandatory evacuations and displacements, overloading local emergency resources.

### Highway Closures:

Toxic smoke or explosions could necessitate the closure of I-80 and I-505 for days, disrupting regional commerce, delaying goods transportation, and creating traffic bottlenecks on alternative routes.

### Economic Impacts:

Prolonged disruptions could result in a conservative \$150–250 million in economic losses, including firefighting costs, business interruptions, healthcare expenses, and property damage.

## 4. Environmental and Health Concerns

### Soil and Water Contamination:

In the event of a fire, runoff from firefighting efforts could contaminate nearby soil and groundwater with heavy metals and toxic compounds, as documented in studies on lithium-ion battery fires. Such contamination would pose significant risks to Solano County's agricultural economy.

### Health Impacts:

Acute exposure to toxic gases like hydrogen fluoride can lead to severe respiratory damage, cardiac arrhythmias, and death. Chronic exposure to even low levels could cause long-term health effects for residents in the affected area.

## 5. Security Risks

Battery energy storage systems near critical infrastructure and population centers are at heightened risk of malicious attacks. Studies published in the Journal of Infrastructure Systems reveal that:

### Target for Cyber and Physical Attacks:

Facilities like the Corby BESS are vulnerable to attacks that could cause cascading failures in the power grid and disrupt regional transportation networks.

### Potential for Widespread Disruption:

A successful attack could amplify the risks of fire or explosion, creating widespread power outages and compounding emergency response challenges.

### Conclusion and Recommendation

While energy storage is essential for achieving California's renewable energy goals, the proposed Corby BESS poses unacceptable risks to public safety, the environment, and the regional economy. Scientific evidence and real-world incidents highlight the dangers of siting such a facility near populated areas and critical infrastructure.

I strongly urge the CPUC to:

Deny approval of the Corby BESS at its current location.

Require the exploration of alternative, more remote locations for the project.

Mandate rigorous safety measures and independent risk assessments to ensure public health and safety are prioritized.

Thank you for your attention to this critical matter. I trust the CPUC will make a decision that safeguards the well-being of Solano County residents and aligns with California's commitment to responsible and sustainable development.

Sincerely,  
John Rayfield