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Comment Received From: Jacqueline Ayer
Submitted On: 6/23/2026
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Comment letter from Save Our Rural Town

Additional submitted attachment is included below.

SAVE OUR RURAL TOWN

Eric Veerkamp
Project Manager
California Energy Commission
715 P Street, MS-40
Sacramento, CA 95814

June 23, 2026

Subject: Comments by Save Our Rural Town (SORT) pertaining to the Sequoia Energy Storage 1, LLC BESS development

Reference: California Energy Commission Docket Number 26-OPT-02.

Dear Mr. Veerkamp;

Save Our Rural Town (SORT) respectfully offers the following preliminary assessment of the "Public Health" analysis provided by Sequoia Energy Storage 1, LLC (developer) for a proposed Battery Energy Storage System (BESS) that is currently undergoing review by the California Energy Commission (Commission) in the referenced Docket. In particular, we found a number of significant deficiencies that must be addressed before the Commission can move forward with processing the developer's application. In the interest of brevity, these deficiencies are summarized below in a bullet format. Please note that all the page numbers cited below refer to the 2,635 page document that is identified as TN# 270248 and described as "Application for Opt-In Certification Part 2" in the referenced Docket.

- The AERMOD modeling utilized a 50 meter spacing parameter [page 34]. This is not sufficiently granular; the modeling should be repeated with a 25 meter minimum spacing.
- The developer does not provide a derivation for the 0.2769521 grams/second emission rate that was assumed for hydrogen fluoride [page 840] and does not explain where this emission rate comes from. Instead, the developer offers the following uncorroborated statements for which no supporting data are provided and no citations are given:

  "*Experimental studies of battery fires and industrial hydrogen fluoride releases show that only a small percentage of hydrogen fluorides generated from these sources remain airborne*" [page 35].

  "… a *0.75 reduction factor was standard in hydrogen fluoride emissions was observed due to differing mechanical confinement, vents, and partial retention or internal recombination of fluorinated species*" [page 35].

These statements are not merely unsubstantiated; they are factually incorrect. For example, experimental studies demonstrate that the hydrogen fluoride (HF) emitted from a battery fire remains airborne and highly reactive until it contacts a surface with which it reacts; this reactivity is why HF emission measurements from battery fires are prone to error[1]. Accordingly, ***all*** the HF ejected from a burning BESS remains airborne and in a vapor state until it is incident on the physical surface of a downwind receptor; the HF does not just disappear. Moreover, published studies demonstrate that "internal recombination" of "fluorinated species" *does not* occur during a battery fire; in fact, the fluorine present in a battery fire has been shown to quickly convert to HF because intermediaries such as PF_5 and POF_3 rapidly break down to HF[2]. Additionally. SORT has reviewed many HF emission studies of battery fires and never encountered any that claim a 0.75 reduction factor was "observed" due to "mechanical confinement" or "vents". The applicant for the BESS development proposed in Docket #25-OPT-02 has made a similar claim that was equally uncorroborated and which has been thoroughly debunked[3].

- The developer applies multiple "Pouch to Cylinder" reduction factors to the claimed HF emission rate (specifically, a 75% "Calculated Reduction Factor" and a 50% "Modeled Reduction Factor" [page 840]); however, these "Pouch to Cylinder" HF reduction factors are neither explained nor justified. Notably, similar HF reduction factors were claimed by the applicant for the BESS development proposed in Docket #25-OPT-02; however, responsive comments filed in that docket by SORT demonstrate that the claimed "Pouch to Cylinder" reduction factors have no basis in science or fact[4]. SORT's comments filed in Docket #25-OPT-02 are incorporated herein by reference.

- The developer's application includes a spreadsheet that refers to an article titled "Environmental Study on the Termal Runaway and Fire Behaviors of Large Format Lithium Iron Phosphate Battery" [page 840]. Presumably, this refers to a study published in 2021 and authored by Liu, et al which describes confined space testing

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[1] Yan, Y et al; *Hydrogen fluoride emissions from lithium-ion batteries during induced thermal runaway via in situ laser spectroscopy*. Department of Mechanical and Aerospace Engineering, University of California, Los Angeles. Proceedings of the Combustion Institute 41 (2025) https://www.sciencedirect.com/science/article/pii/S1540748925000148

[2] Larsson, F. et al. *Toxic fluoride gas emissions from lithium-ion battery fires*. 2017. Scientific Reports. Pages 1-2. https://www.nature.com/articles/s41598-017-09784-z

[3] Scoping comments filed on March 4, 2026 in Docket 25-OPT-02; page 18. https://efiling.energy.ca.gov/GetDocument.aspx?tn=268944&DocumentContentId=106134, https://efiling.energy.ca.gov/GetDocument.aspx?tn=268943&DocumentContentId=106135. These comments are incorporated herein by reference.

[4] SORT Comment Letter filed on April 6, 2026 in Docket # 25-OPT-02. [https://efiling.energy.ca.gov/GetDocument.aspx?tn=269416&DocumentContentId=106510; see also SORT Comment letter filed May 21, 2026 in Docket in Docket #25-OPT-02 [https://efiling.energy.ca.gov/GetDocument.aspx?tn=270152&DocumentContentId=107314].

of ignited 243 Ah battery cells. This same study was cited by the applicant for the BESS development proposed in Docket #25-OPT-02, and responsive comments showed that the HF measurements reported in the study were substantially flawed and singularly inappropriate for the purpose of estimating HF emission rates from BESS fires[5]. The authors of the study openly admit to HF measurement inaccuracies because HF "is highly soluble in water and its reactivity with alkaline products". Unfortunately, copyright restrictions prevent SORT from providing a copy of this study to the Commission; however, a copy can be purchased for less than $50[6]. In short, nothing in the spreadsheet that is included with the developer's application or in the study cited by the developer corroborates or justifies the 0.2769521 g/s HF emission rate that is assumed in the application.

- BESS fires actually emit significant quantities of HF because the flammable electrolyte that is present in every BESS unit contain high concentrations of dissolved fluorinated salt (typically $LiPF_6$). During a BESS fire, the heat and moisture generated by the burning electrolyte causes the fluorinated salt to dissociate and form large quantities of HF. For example, the SunGrow PowerTitan 2 BESS identified by the developer on page 35 contains sufficient $LiPF_6$ to generate more than 6,000 pounds of HF emissions if a BESS fire were to ignite all the electrolyte in a PowerTitan 2[7].

- The only accurate statement addressing HF emission rates that is provided by the developer is "hydrogen fluoride gases scale with electrolyte mass" [page 35]. However, the developer does not provide any information regarding the mass of electrolyte (or the mass of fluorinated salt dissolved in the electrolyte) that is present in the CATL EnerC+ BESS system proposed by the developer[8]. Specifically, SORT has not been able to locate the "Safety Data Sheet" (SDS) for the CATL EnerC+ battery cells anywhere in the Docket Log. Perhaps we have somehow missed it; if not, the SDS must be produced and posted in the Docket because without it, the Commission will lack the information required to derive an accurate HF emission rate that can be applied to AERMOD dispersion modeling results.

- Another concern is that the location of the BESS fire that the developer modeled appears to have been carefully chosen to ensure that the peak 1-hr χ/Q value output from the AERMOD analysis would fall within the project boundary and not coincide with an offsite receptor location. Specifically, page 784 states that the location of the

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[5] Pages 5-7 of the SORT Comment Letter filed on April 6, 2026 in Docket # 25-OPT-02. [https://efiling.energy.ca.gov/GetDocument.aspx?tn=269416&DocumentContentId=106510].

[6] https://www.sciencedirect.com/getaccess/pii/S2352152X20315516/purchase

[7] Pages 13-14 of the SORT Comment Letter filed on April 6, 2026 in Docket # 25-OPT-02. [https://efiling.energy.ca.gov/GetDocument.aspx?tn=269416&DocumentContentId=106510].

[8] Page 37 refers to the CATL EnerC+ system and states it has 4.160 battery cells; additionally, page 840 indicates that the AERMOD analysis assumes a BESS that has 4,160 battery cells per BESS unit.

modeled BESS fire is at UTM coordinates 610711.079 (easting) and 4090031.223 (northing), and page 722 reports that the peak 1-hr χ/Q value resulting from the modeled BESS fire location is 1446 and occurs at 610483.87 (easting) and 4090384.64 (northing). This happens to be a location that is just inside the project boundary; it also happens to virtually coincide with the location of the peak 8-hr χ/Q value[9]. However, if the developer had chosen a BESS device located further east to model a fire, the 1446 peak χ/Q value would be in the front yard of the adjacent residence. This fact is demonstrated in Figure 1 below, and it suggests that the developer's AERMOD analysis does not fully capture potential MEIR locations. This is important, because when the peak χ/Q value projected for this alternative location (1446) is reconciled with the developer's assumed HF emission rate (0.2769521 g/s), the projected HF concentration at the front yard of the adjacent residence is 400.5 μg/m^3 which substantially exceeds the 240 μg/m^3 REL threshold for HF. Accordingly, and contrary to what the developer claims on page 843, the AERMOD results show that the ignition of some BESS units will result in unacceptable HF concentrations on adjacent residential properties. This suggests that, at the very least, the developer should be directed to conduct additional AERMOD analyses to ensure MEIR values are properly ascertained.

- The forementioned analysis is not to be construed to mean that SORT concurs with the developer's HF assumption rate. To the contrary, SORT believes the actual HF emission rate from a BESS fire will be substantially higher than the 0.2769521 g/s assumed by the developer and, by extension, that a BESS ignition will result in unacceptably high 1-hour and 8-hour HF concentrations at locations far outside the project boundary. However, the data that is necessary to establish a more accurate HF emission factor (such as SDS information) has not yet been put into the record; therefore, the application remains incomplete.

SORT hopes that the Commission finds the information provided herein[10] to be useful in assessing the completeness and accuracy of the developer's application. If you have any questions or require further information, please do not hesitate to contact SORT at SORTActon@gmail.com.

Sincerely;
/S/Jacqueline Ayer
Jacqueline Ayer, Director
Save Our Rural Town

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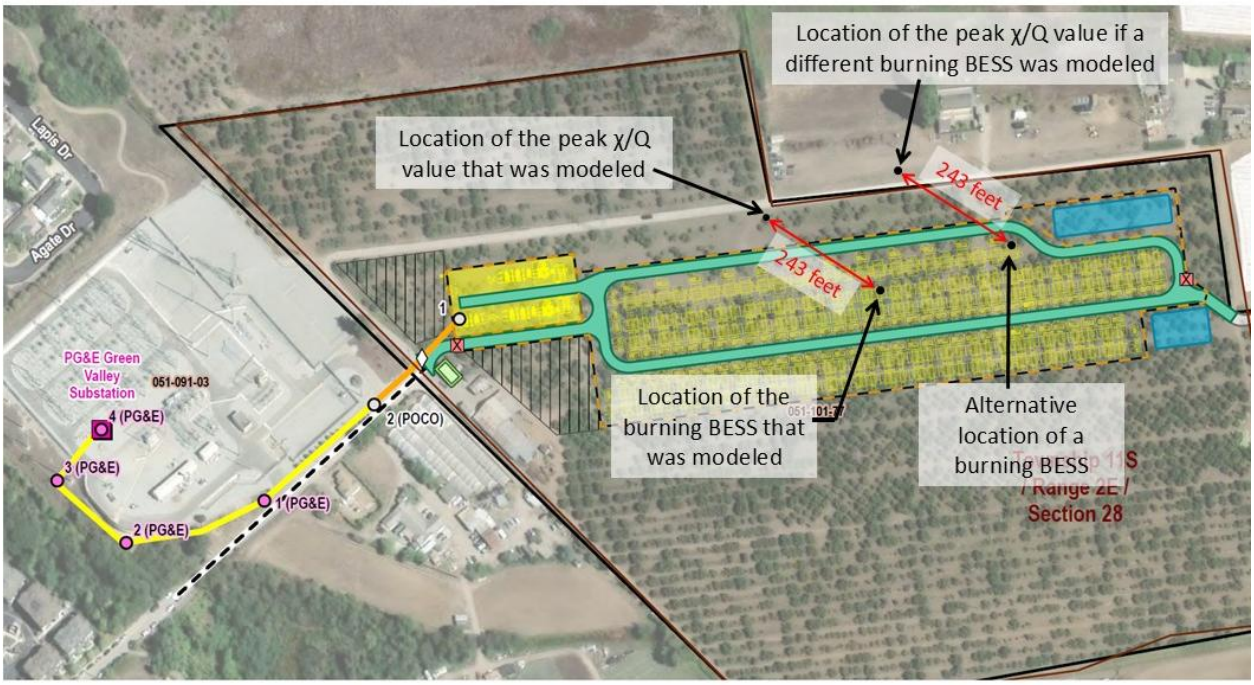
[9] According to page 741, the peak 8-hr χ/Q value is 433.81 at UTM coordinates 610691.81, 4090101.98.
[10] Please note these comments were prepared by Jacqueline Ayer, the Director of SORT. Ms. Ayer has decades of engineering experience in air quality (air toxic and criteria pollutant emissions assessments, toxic risk determinations, pollution control, etc.), environmental compliance, land use, and energy/ transmission system assessments. Accordingly, the comments offered below constitute "substantial evidence" as that term is defined by CEQA.

Figure 1. Source and Maximum χ/Q locations Modeled by the Developer and the Location of the Maximum χ/Q Value When a Different Source Location is Modeled.



Note: The map is excerpted from Figure 2-1 of the developer's application.