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Supplemental 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

August 11, 2026

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

Reference: Application for Opt-In Certification.
California Energy Commission Docket Number 26-OPT-02.

Dear Mr. Veerkamp;

Save Our Rural Town (SORT) respectfully offers the following supplemental comments on the application submitted by Sequoia Energy Storage 1, LLC (applicant) for a proposed Battery Energy Storage System (BESS project or project) that is currently undergoing review by the California Energy Commission (Commission) in the referenced Docket. These comments focus on deficiencies, errors, and omissions noted in the applicant's noise analysis presented in Section 3.7 of the referenced application. SORT has found this noise analysis to be so substantially deficient that it would be imprudent for the Commission to rely upon it for the purpose of assessing noise impacts of the proposed project. In the interest of brevity, these deficiencies are summarized below in a bullet format.

- Table 3.7-11 of the applicant's impact analysis addresses potential vibration impacts that will result from project construction activities and identifies sonic pile drivers as sources of potentially significant vibration impacts. This indicates that sonic pile drivers will be deployed during project construction. However, the applicant's construction noise analysis does not address sonic pile driver operations, and according to the noise modeling results reported in Appendix 3.7B, pile driver operations were excluded from the applicant's construction noise analysis. Given that pile drivers are typically the single largest source of noise on construction sites, this omission renders the applicant's noise impact analysis substantially underpredictive and therefore substantially deficient.

- Applying a reasonable 99 dBA Reference Level L_{max} value at 50 feet for the sonic pile drivers used in project construction[1] and assuming a geometric attenuation rate of 6 dBA per distance doubled[2], all receptors within 200 feet of the construction site will experience a constant 87 dBA pounding noise throughout the days when pile drivers are operated. This substantially exceeds any reasonable threshold of significance and demonstrates that the project will result in significant noise impacts.

- Another deficiency noted in the applicant's noise analysis is that it reports noise model outputs as average values that were derived by averaging all projected noise insults over an 8 hour period (see Appendix 3.7B). This methodology "masks" very loud noises (such as 85 dBA concrete paver machines and concrete saws[3]) by averaging them out. The reported noise impact results are already artificially suppressed due to omissions of pile driver noise insults; they are further suppressed by the applicant's choice to report average (L_{eq}) noise results rather than actual or maximum (L_{max}) noise results. Moreover, because these averaged results do not represent *actual* noise levels, they cannot be used to determine whether construction activities comply with the 75 decibel (dB) limit established by the Santa Cruz County General Plan and the Santa Cruz County Noise Ordinance (as discussed in detail below). All of this renders the applicant's noise analysis deficient.

- The applicant does not address the Santa Cruz County Noise Ordinance codified in Chapter 8.30 of the County Code which establishes that any noise level at the project boundary which exceeds 75 dB is designated as "Offensive Noise" and requires mitigation[4]. This 75 dB standard is an *actual* maximum noise standard (L_{max}) and not an *average* (L_{eq}) standard. And, given that construction operations will frequently exceed the County's 75 dB noise standard at the property line (particularly whenever pile drivers are operated[5]), the project will violate the Santa Cruz County Noise Ordinance and thus result in significant construction noise impacts.

- The applicant claims on pages 3.7-9 to 3.7-11 that project construction will not exceed any local noise standards set forth in adopted plans or ordinances, and then

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[1] According to page 15 of the Ventura County *Noise And Vibration Assessment Guidelines* adopted November, 2005, amended July 2010, and revised July 2025, a sonic pile driver has a 50-Foot Maximum Noise Level (Lmax) of 99 dBA. According to Table 7-1 of the *2018 Federal Transit Authority Transit Noise and Vibration Impact Assessment Manual*, sonic pile drivers generate a typical 50 foot noise level of 95 dBA.

[2] The 6 dBA per distance doubled is a reasonable attenuation assumption given that the area is rural, the project site will be hard pack dirt but the surrounding residential areas are vegetated, and there are no buildings or structures between the construction site and surrounding residences.

[3] See Appendix 3.7B of the application.

[4] Santa Cruz County Code § 8.30.010.

[5] The project site is approximately 350 feet wide; therefore, pile driver noise at the project boundary will exceed 80 dBA based on a geometric attenuation rate of 6dBA per distance doubled and assuming a 99 dBA 50-Foot Maximum Noise Level.

points to the average L_{eq} noise results modeled for the nearest receptor that are reported in Table 3.7-5 to claim that construction noise impacts will be "less than significant". However, this claim is not supported by any evidence. First, the applicable local noise standard is 75 dB (as explained above) and it is an *actual* (L_{max}) standard, not an *average* (L_{eq}) standard; therefore, the applicant's noise analysis does not provide a substantive basis for establishing whether project construction will comply with the County's actual (L_{max}) noise standard. Second, the average L_{eq} outputs from the applicants noise model are biased low because they do not account for pile driver operations; thus, they are unreliable for compliance purposes. Third, the 75 dBA L_{eq} results reported in Table 3.7-5 for receptor locations 2 and 3 clearly indicate that *actual* noise levels at these locations will exceed the 75 dB standard adopted by the Santa Cruz County General Plan and Noise Ordinance; this is because an average 75 dBA L_{eq} is only possible when actual noise levels exceed 75 dBA (at least occasionally). In other words, the 75 dBA *average* L_{eq} results reported in Table 3.7-5 are clearly indicative of the fact that *actual* construction noise levels will exceed Santa Cruz County's 75 dB noise standard.

- The applicant purports to rely on the "Noise Element" of the Santa Cruz County General Plan to assess whether project construction noise impacts are "significant" and states on page 3.7-9 that the Noise Element "recommends" noise mitigation measure when "average construction noise levels would exceed 75 dBA L_{eq} at any existing residences in the project vicinity". However, the applicant fails to identify where this "recommendation" is established in the Noise Element, and SORT cannot find it. What SORT *did* find is Noise Element Policy 9.2.6 which states that noise mitigation is *required* for construction activities "particularly if noise levels would exceed 75 dB at neighboring sensitive land uses or if construction would occur for more than 7 days"[6]. Given that project construction activities will persist for more than a year, the Noise Element clearly *compels* noise mitigation measures for all BESS project construction activities; therefore, the applicant is wrong to claim that the Noise Element merely *recommends* noise mitigation. Despite this clear General Plan directive, the applicant's noise analysis assumes that no construction noise mitigation measures are deployed[7] and the applicant states on page 3.7-19 that no construction noise mitigation measures are necessary. Accordingly, the applicant's noise analysis *does not* comport with the adopted Noise Element. Additionally, the applicant grossly misrepresents the 75 dB standard set by the Noise Element as an *average* (L_{eq}) standard rather than an *actual* (maximum) standard even though the

[6] Policy 9.2.6 states "*Require* mitigation and/or best management practices to reduce construction noise as a condition of project approvals, particularly if noise levels *would exceed 75 dB* at neighboring sensitive land uses *or if construction would occur for more than 7 days* (emphasis added).

[7] According to the noise model output data reported in Appendix 3.7B, no shielding or noise barriers are assumed.

plain and unambiguous language of Policy 9.2.6 clearly establishes that the policy is violated *whenever construction noise levels at a neighboring sensitive receptor exceeds 75 dB*. Therefore, and contrary to what the applicant claims, the 75 dB standard established by the Noise Element ***is not*** an average or L_{eq} standard. In short, none of the information pertaining to the Santa Cruz County Noise Element that is provided by the applicant is accurate or honest.

- The applicant also fails to address the fact that the Noise Element of the Santa Cruz County General Plan establishes on page 9-9 that periodic noise (which includes construction noise) is subject to the County Noise Ordinance (set forth in Chapter 8.3 of the County Code) and that violations of the County Noise Ordinance perpetrated by periodic noise sources are deemed "offensive" and "unacceptable" noises which can result in prosecution as "nuisance noise" violations. The Noise Element of the General Plan unequivocally establishes that construction activities must comply with the County Noise Ordinance (which, as explained above, limits daytime noise levels at the property boundary to just 75 dB).

- Now that we have "set the record straight" regarding compliance requirements imposed by the Santa Cruz County Noise Element and the fact that it compels construction projects to comply with the 75 dBA fenceline limit established by the County Noise Ordinance, we now turn to the question of whether the BESS project will comply with these requirements. Unfortunately, the applicant's noise model outputs only report L_{eq} noise values that are averaged over an 8 hour period[8] and do not provide any actual noise values, so the applicant's modeling results are useless for the purpose of assessing consistency with the Santa Cruz County General Plan. However, there is sufficient information provided in the application to provide an engineering estimate of whether project construction complies with the General Plan's 75 dB noise limit at the project boundary. According to Figure 2-1 of the application, the northeast boundary of the property is less than 120 feet from the construction zone that is in the vicinity of Receptors 1 and 2, and according to page 2 of Appendix 3.7-B, the concrete paving rollers will generate an L_{max} noise level of 85.1 dBA at 50 feet. Assuming a geometric attenuation rate of 6 dBA per distance doubled, the noise generated by the paving equipment will exceed 79 dBA at 100 feet and will therefore certainly exceed 77 dBA at the property boundary 120 feet away. Additionally, the applicant's noise analysis omits all pile driver operations (even though pile driver operations are accounted for in the vibration analysis) and, as explained above, these pile driver operations will substantially exceed 75 dBA at the property boundary. Furthermore, the applicant reports in Table 3.7-6 that Receptors 2 and 3 will experience an average L_{eq} noise level of 75 dBA, which means that most

[8] Ibid.

noise insults will either be greater than 75 dBA or less than 75 dBA; therefore, maximum noise levels experienced by Receptors 2 and 3 will certainly (and routinely) exceed 75 dB. Together, these facts conclusively demonstrate that construction on the proposed project will exceed the noise standards imposed by the Noise Element, and that the project is therefore inconsistent with the Santa Cruz County General Plan.

- The Applicant claims on page 3.7-11 that construction noise impacts are "Less than Significant" and that noise mitigation is not required because the Santa Cruz County Noise Element does not recommend mitigation if the average construction noise levels do not exceed 75 dBA L_{eq}. The applicant is incorrect. As explained above, Noise Element Policy 9.2.6 *requires* mitigation when *actual* noise exceeds 75 dB or when construction activities persist for more than 7 days. Because construction will persist for more than a year and because *actual* construction noise *will* exceed 75 dB beyond the project boundary, construction noise impacts *are* significant and noise mitigation *is* required by the Noise Element.

- The applicant claims on page 3.7-11 that construction noise impacts are "Less than Significant" because the Federal Transit Administration's "Transit Noise and Vibration Impact Assessment Manual" (FTA's Guidance Manual) allegedly establishes an 80 dBA L_{eq} guideline for "daytime construction noise exposure at residential land uses" that is "averaged over a typical 8-hour construction day". However, the applicant has misrepresented the FTA Guidance Manual which establishes that, for construction activities lasting more than 30 days, a 75 dBA L_{dn} threshold is the correct standard and not an 8 hour 80 dBA L_{eq} threshold[9]. There are other reasons why the applicant's arguments are not persuasive. First, the applicant's noise analysis omits pile driver operations and therefore substantially underestimates actual construction noise impacts; accordingly, construction activities *will* exceed FTA's 75 dBA threshold when pile driver operations are factored in[10]. Second, the applicant is not proposing a transit project, so FTA guidelines are not particularly relevant. Third, the FTA's Guidance Manual states on page 172 that "it is not the purpose of this manual to specify standardized criteria for construction noise impact[s]"; this is an open acknowledgement by the FTA that the FTA Guidance Manual does not establish noise impact criteria and is therefore not to be used to establish whether such impacts are "Significant". Fourth, the FTA's average 80 dBA L_{eq} "guideline" is fundamentally inapplicable because it is inconsistent with the actual 75 dB noise standard adopted by Santa Cruz County. Fifth, the 80 dBA L_{eq} FTA "guideline" contradicts noise impact guidelines adopted by

[9] *2018 Federal Transit Authority Transit Noise and Vibration Impact Assessment Manual*. Table 7-3.
[10] Table 3.7-5 of the applicant's noise analysis states that the average construction noise level is 75 dBA L_{eq}. The actual value will be even higher due to sonic pile driver operations.

the Governor's Office of Planning And Research which establish that anything exceeding 70 dBA L_{eq} is "Normally Unacceptable"[11]. For all these reasons, the applicant's arguments regarding FTA "guidelines" are not dispositive and do not affirm that construction noise impacts are "Less than Significant".

- On page 3.7-11, the applicant argues that construction noise impacts are "Less than Significant" because they are not "hazardous or harmful". However, "hazardous or harmful" is not the applicable standard for determining whether noise impacts are "Significant" and the applicant cites to no evidence demonstrating that "hazardous or harmful" is appropriate for assessing the significance of noise impacts. Accordingly, this argument is insubstantial and should be dismissed.

- On page 3.7-11, the applicant argues that construction noise is "Less than Significant" because it would occur only during the day and would therefore avoid sleep disturbance. While it is important for construction activities to avoid sleep disturbance, "avoiding sleep disturbance" is not the principal standard for determining whether noise impacts are "Significant". Furthermore, the applicant cites to no evidence which demonstrates that "avoiding sleep disturbance" is the appropriate threshold for assessing the significance of noise impacts. Accordingly, this argument lacks substance.

- On page 3.7-11, the applicant argues that construction noise is "Less than Significant" because it is "temporary" and will last "only until construction is completed". However, the 13 month construction schedule proposed by the applicant[12] is hardly "temporary" and it certainly extends far beyond the 7 day timeframe established by the Santa Cruz County Noise Element for when construction noise mitigation is required.

- On page 3.7-11, the applicant argues that construction noise is "Less than Significant" because the "indoor areas of the residences" would experience noise levels "no greater than 50 dBA L_{eq}" and thus not "interfere with conversation". The Applicant offers no evidence to support this statement, and insofar as SORT is aware, the applicant did not assess the quality or efficacy of any noise insulating materials used on the residences surrounding the project or conduct any inside/ outside residential noise assessments. The legitimacy of this claim is further eroded by the fact that it is certainly not true in instances where residents open windows or doors for ventilation (which is likely to occur during summer months). Accordingly, this argument should be dismissed as uncorroborated and insubstantial.

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[11] *State of California 2017 General Plan Guidelines* published by the Governor's Office of Planning and Research. Page 374.
[12] Page 5 of Appendix 3.7B.

- On page 3.7-11, the applicant affirms that construction noise will result in an increase of 30 dBA L_{eq} at adjacent residences (from 40 dBA L_{eq} to 70 dBA L_{eq}) and that this will cause "annoyance"; nevertheless, the applicant dismisses these impacts as "Less than Significant". Ironically, the FTA Guidance Manual that the applicant repeatedly invokes states quite clearly that noise impacts are considered to be "Severe" when they increase noise exposure from 40 dBA L_{eq} to 55 dBA L_{eq}[13]. Clearly, increasing noise exposure from 40 dBA L_{eq} to 70 dBA L_{eq} is even more significant than "Severe". Based on these facts, the applicant's claim that construction noise impacts are "Less than Significant" should be accorded no weight.

- There are also substantial flaws in the applicant's analysis of operational noise. For instance, the applicant states on page 3.7-13 that the operational noise analysis assumes that all fans and cooling equipment will operate at 50% rather than a higher value that would be more realistic and representative of an actual "worst case" noise scenario. The applicant justifies this paltry 50% operating assumption by claiming that "The battery storage enclosures would not be always running under full load; therefore, the use of the 50% load sound generation value represents a conservative analysis". It is clear from this statement that battery storage enclosures will operate over a range of loads *including* a full load (i.e. 90% or more); therefore, a 50% load assumption *is not* conservative and *does not* reflect actual noise impacts that will result from actual project operations. Furthermore, the BESS battery storage enclosures *will* operate at loads that exceed 50% to meet power demands on the grid; it is also likely that such operations will be sustained for lengthy intervals of time. Therefore, the applicant's operating noise analysis should have been based on a 90% load assumption to ensure truly conservative results. Because the applicant's noise analysis fails to capture "real world" and "worst case" operating conditions, it is essentially worthless and cannot be relied upon by the Commission for the purpose of assessing the project's environmental impacts.

- Another deficiency noted in the applicant's operational noise analysis is that it assumes a ground absorption value of 0.5[14] which, according to the applicant, represents "bare dirt". SORT respectfully disagrees. Bare dirt and other hard packed surfaces tend to absorb little to no noise[15]; therefore, a ground absorption value of 0.5 is inappropriate. Moreover, the applicant's site plan indicates that both the BESS yard and the substation will be covered in compacted gravel[16] which, at the very most, will have a ground attenuation factor of 0.3. The applicant attempts to justify

[13] *2018 Federal Transit Authority Transit Noise and Vibration Impact Assessment Manual*. Figure 4-2.
[14] See page 3.7-14.
[15] ISO 9613-2.
[16] Appendix 2A Sheet C-2.1.

this 0.5 ground attenuation factor by claiming that it "ignores a landscaping area within the project site"; however, all landscaped areas are outside of, and lower than, the solid wall that surrounds the property[17]; therefore, landscaping is not a factor in noise propagation at the project site. Because the applicant's operational noise analysis is based on an inappropriately high ground attenuation factor, the results are not representative of actual project conditions and should be accorded no weight.

- On page 3.7-15, the applicant correctly identifies 45 dBA as the applicable nighttime L_{eq} noise standard established by Chapter 13.15 of the County Code[18]; the applicant then points to the values reported in Table 3.7-8 to claim that the BESS project complies with this standard. However, the values reported in Table 3.7-8 are biased low because they are based on faulty assumptions (such as an inappropriate 50% operating load and a ground attenuation factor of 0.5). Accordingly, *actual* nighttime L_{eq} noise levels will be greater than 45 dBA and will thus violate Chapter 13.15 of the County Code.

- Table 3.7-9 constitutes further proof that project operations will violate Chapter 13.15 of the County Code because it demonstrates that "Existing Plus Project" nighttime L_{eq} values will exceed 45 dBA at two receptor locations where current nighttime L_{eq} levels are only 44 dBA (and thus comply with Chapter 13.15). Table 3.7-9 proves that project operations *will* result in nighttime L_{eq} values which exceed 45 dBA at sensitive receptor locations and thus violate Chapter 13.15. The applicant dismisses these violations by claiming that "the County General Plan Noise Element and County Code set an allowable increase of up to 5 dBA L_{eq} when existing ambient noise levels are less than 60 dBA L_{eq}" (see page 3.7-16). However, the applicant does not identify where this "allowable increase" exists in either the General Plan or the County Code, and SORT cannot find it in either document. Accordingly, the arguments proffered by the applicant to ameliorate this clear violation of Chapter 13.15 are specious and lack merit. The applicant's corollary claim that BESS project operations will have a "Less than Significant" impact on ambient noise levels is equally specious because it is based on a phantom 5 dBA "allowable increase" which does not appear to exist in either the General Plan or the County Code.

- The applicant also fails to acknowledge that the BESS project's transmission line operations will result in unacceptably high noise levels (particularly during inclement weather). Specifically, the applicant states on page 3.7-16 that

[17] The landscape materials must be lower than the solid boundary wall because otherwise, they create a fire hazard because the vegetation will ignite when a BESS on the outer perimeter area ignites due to thermal runaway.

[18] Chapter 13.15 (specifically, Section 13.15.050) adopts the noise thresholds set forth in Table 9-3 of the Santa Cruz County General Plan which establish that the maximum allowable nighttime hourly L_{eq} value is only 45 dB.

transmission line operation will result in a 45 dBA L_{eq} at the property boundary of receptor locations; this means that transmission line operations will increase the total noise level experienced at these receptor locations beyond the 45 dBA standard set by Table 9-3 of the County General Plan. The applicant dismisses this concern by stating "people tend to stay indoors" during inclement weather, but this is not always true. These facts demonstrate that transmission line operations will result in significant noise impacts despite applicant claims to the contrary.

- In Section 3.7.3 of the application, the applicant argues that the project's cumulative noise impacts are "Less than Significant". SORT respectfully disagrees. Because project construction and project operation will result in significant noise impacts, the project's noise contributions will be cumulatively considerable. As such, the project's cumulative noise impacts are "Significant". Moreover, the applicant argues on page 3.7-19 that, because project construction would "comply with limits on allowable construction hours per relevant portions of the County's noise ordinance", cumulative construction noise impacts are "Less than Significant". This argument fails because mere compliance with construction hour restrictions adopted in the County's Noise Ordinance does not render noise impacts to be "Less than Significant"; this is particularly true when construction activities exceed the noise standards that are mandated by the County's Noise Ordinance. Accordingly, the applicant's arguments are not persuasive and must be accorded no weight.

- In Section 3.7.5, the applicant claims that the BESS project complies with all federal, state, and local noise requirements. SORT respectfully disagrees:

  - The Federal Noise Act directs government agencies to "ensure compliance with local community noise statutes and regulations"[19]. As explained above, BESS project construction and operation will violate local noise statutes regulations; therefore, the BESS project does not comply with the Federal Noise Act.

  - Project construction activities do not conform to Federal standards set forth in the FTA Guidance Manual because they substantially exceed the "Severe" impact criteria established in Figure 4.2 (as explained above). Additionally, the applicant's noise analysis is substantially underpredictive because it omits pile driver operations.

  - According to page 3.7-22 of the application, the Federal Interagency Committee on Noise (FICON) establishes that a project poses a significant noise impact if it increases ambient noise by 5 dBA in an area where the existing ambient sound level is less than 60 dBA L_{dn}. Because BESS project construction will increase

[19] See Table 3.7-12 of the applicant's Noise Analysis.

outdoor ambient noise levels by more than 5 dBA in an area where existing ambient noise levels are less than 60 dBA, it does not comport with FICON standards.

- The BESS Project does not conform to standards set forth in the California Environmental Quality Act (CEQA) because the project does not include noise mitigation measures even though project noise impacts *are* "Significant" (as explained above). This controverts the core purpose of CEQA, which is to reduce "Significant" impacts through the implementation of feasible mitigate measures.

- The applicant claims that the California Department of Health Services considers 50 to 70 dBA noise levels to be "conditionally acceptable for low-density residential uses" and that the BESS project complies with this guidance. However, the applicant does not cite to any publication by the California Department of Health Services to support this claim; in fact, the source that the applicant cites was actually published by the Governor's Office of Planning and Research (OPR)[20]. Odder still, the cited OPR document states on page 374 that 70 dBA noise levels in low density residential areas are "normally unacceptable"; it also states that noise levels at or above 75 dBA are "clearly unacceptable". As explained above, offsite BESS project construction noise levels will exceed 75 dBA (particularly when pile driver operations are accounted for) and will thus be "clearly unacceptable" under the OPR/California Department of Health Services standard cited by the applicant.

- Project construction activities do not conform to the Santa Cruz County General Plan because no noise mitigation measures are proposed even though General Plan Policy 9.2.6 requires noise mitigation measures for construction projects that last more than 7 days or exceed 75 dBA (both of which will occur according to the applicant's noise analysis).

- Project operations do not conform to the Santa Cruz County General Plan because they exceed noise standards set forth in Table 9-3 (as explained above).

- The applicant claims that project construction activities conform to Chapter 13.15 of the Santa Cruz County Code which requires all uses to comply with Table 9-2 of the General Plan and establishes that an average 75 dBA noise level at the property boundary is "Clearly Unacceptable" for residential uses. However, the applicant's noise analysis conclusively proves that the average L_{eq} noise level at multiple receptor locations is 75 dBA and is therefore "Clearly Unacceptable". Moreover, because pile drivers will be utilized during construction, and because

[20] The document cited by the applicant is OPR's "2017 State of California General Plan Guidelines".

the applicant's noise analysis omits any consideration of pile driver noise, the *actual* noise level generated by project construction activities will substantially exceed the noise standard established by Chapter 13.15 of the Santa Cruz County Code. Notably, Chapter 13.15 exempts "temporary construction operations" from the noise restrictions imposed by Table 9-2 of the General Plan; however, this exemption does not apply to the proposed BESS project because construction operations will persist for 13 months and are therefore not "temporary". This is particularly true given that the General Plan requires mitigation for construction projects lasting more than 7 days; arguably, this means that, for the purpose of construing the General Plan and the applicability of Table 9-2, "temporary" construction does not extend beyond 7 days.

- The applicant claims that project operations conform to Chapter 13.15 of the Santa Cruz County Code which requires all uses to comply with Table 9-3 of the General Plan. However, and as explained above, project operations do not comply with Table 9-3 and thus do not conform to Chapter 13.15.

Nothing about the BESS project conforms to federal, state, and local noise standards, policies, or regulations. Furthermore, the applicant's noise impact analysis is so deficient that it cannot be relied upon by the Commission for the purposes of assessing the environmental impacts of the project's construction activities.

- Another deficiency noted in the applicant's operational noise analysis is that it fails to consider impacts of the low frequency noises that will be generated by the inverters and transformer equipment. In fact, Appendix 3.7D clearly indicates that the applicant's noise impact analysis is based on an "A-weighted" noise scale which disregards virtually all low frequency noise insults[21]. The applicant's noise assessment ignores low frequency noise impacts, and therefore cannot be relied upon by the Commission to assess the project's noise impacts.

- It is essential that the Commission consider low frequency noise in the Environmental Impact Report (EIR) that is prepared for the BESS project. To understand the importance of this, a brief discussion on noise frequency is in order:

  – Human response to sound is dictated by "loudness" (which is a function of the amplitude or pressure level of the sound wave and is measured in decibels or dB) and "pitch" (which is a function of the frequency of the sound wave and is measured in hertz). The human ear is most sensitive to sounds in the 1,000-5,000 hertz range because a sound within that range is perceived by the ear as

[21] The A-weighted filter suppresses measured sound pressure levels in low frequency bands (particularly below 500 hertz).

more intense than sounds of lower frequencies with the same magnitude. To emphasize this frequency range where the human ear is most sensitive, adjustments are made within sound level meters to increase the weighting of noise frequencies in the 1,000-5,000 hertz range; this essentially suppresses the measurement of noise in the low frequency range. These automatic adjustments are known as "A-scale weighting" and they approximate the frequency response of the average young ear when listening to ordinary sounds. In this manner, the judgement of the relative loudness of a sound correlates with the A-scale sound level of the sound. Because of this, noise standards and noise measurement methodologies are typically based on A-weighted sound levels (known as dBA).

- Humans are substantially affected by low frequency sounds below 1,000 Hz even though these sounds are not fully perceived by the ear; this is because low frequency sounds are perceived by the body as a whole. Low frequency noise insults present themselves as a background hum that verges on a low vibration which the body "senses" more than the ear "hears". A person can actually be unaware of the low frequency noise insults perceived by their body until the noise is curtained, at which time an immediate sense of relief is experienced. Low frequency sound is often characterized as an "annoyance" because of the way it affects the human body. And, because adopted noise standards and noise reporting procedures are typically based on the A-weighted scale, they fail to capture or address significant noise insults that occur in the low frequency range. According to a publication on the National Institutes of Health and the National Library of Medicine website, low frequency noise is a "special environmental noise problem, particularly to sensitive people in their homes"; the publication further explains that "conventional methods of assessing annoyance, typically based on [an] A-weighted equivalent level, are inadequate for low frequency noise and lead to incorrect decisions by regulatory authorities"[22]. This is important because utility scale electrical facilities tend to generate significant low frequency noise that can be very disruptive to adjacent residential uses.

- The significant low frequency noise that will be generated by the proposed BESS will not be attenuated by the wall surrounding the BESS yard because low frequencies are not effectively attenuated by barriers[23]. Accordingly, the proposed BESS project will result in significant and unmitigable low frequency noise impacts. These concerns were ignored by the applicant, but they must be addressed in the Commission's environmental assessment.

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[22] Leventhall H. G. *Low frequency noise and annoyance*. Noise Health. 2004 Apr-Jun;6(23):59-72. A copy of this article can be provided upon request.

[23] Low frequency noise is "inherently difficult to shield with a barrier". *2012 Federal Railway Administration High-Speed Ground Transportation Noise and Vibration Impact Assessment.* Page 4-17.

SORT respectfully requests that the Commission consider the information presented above and factor it into future environmental assessments prepared for the proposed BESS project.

Respectfully submitted;

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