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Subject:	Corby BESS: Project Description Update #2 Supplemental Data Requests
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Attachments:	image001.png

Hi Qaim and Nadan,

Provided below are Corby BESS Project Description Update #2 Supplemental Data Requests. Responses should be filed to the project docket. Please let us know if you have any questions. Thank you!

Thermal Runaway Data Requests:

Table 6 in Appendix 3.9-A Thermal Event Plume Analysis (TN 268433) presents the acute hazard quotients for individual pollutants based on Reference Exposure Level (REL) values. The applicant indicates that the hazard index (HI) calculation is based on the Sensitive Receptor's (No. 986) result. Staff reviewed the AERMOD output files for Sensitive Receptor No. 986 and observed that the modeled 1-hour concentrations associated with source 11 (which appears to produce the highest impacts at this receptor) differ from the concentrations that can be back-calculated from Table 6 using the reported acute hazard quotients values and corresponding RELs.

> **SDR TR-1:** Please provide the impacts calculation spreadsheet including the modeled worst-case 1-hour concentrations used for each pollutant at the maximally exposed individual receptor, along with identification of corresponding modeling scenarios from which concentration value was selected.

Table 1, Table 2 and Table 3 in Appendix 3.9-A Thermal Event Plume Analysis (TN 268433) do not provide emission factors or calculation steps for nitrogen dioxide (NO_2) or sulfur dioxide (SO_2). However, Table 7 presents modeled concentrations for these pollutants. In addition, the carbon monoxide (CO) concentration calculation is not clearly documented.

> **SDR TR-2:** Please provide the impacts calculation spreadsheet, which includes the proposed emission factors, calculation steps, and supporting documentation used to derive the modeled SO_2, NO_2 and CO concentrations in Table 7.

Table 3 in Appendix 3.9-A Thermal Event Plume Analysis (TN 268433) presents the emission factor of Hydrogen Cyanide (HCN) as 658.5 mg/kg, which is stated as the average computed from the RAMBOLL OCA report. Staff reviewed the two references cited in the RAMBOLL OCA report for HCN and observed that reference 11 characterizes emissions from stand-alone $LiPF_6$ and LiFSI-based carbonate electrolytes, with no actual battery testing conducted. The HCN emission factor from reference 11 is 64 mg/kg, which is much lower than the emission factor of 1,253 mg/kg from the other reference (#10).

> **SDR TR-3:** Please provide additional justification demonstrating how emission factors derived from electrolytes experiments are applicable to lithium-ion

battery fire scenarios.

Using the applicant's assumed 22.5% battery mass loss for estimating emission factors, the implied mass loss is approximately 1.26 g/Wh. Staff finds that literature (Franqueville 2023) reports the mean mass loss is approximately 2.3 g/Wh.

SDR TR-4: Please clarify which value is considered more representative of the proposed battery fire scenario and provide supporting justifications.

Appendix 3.9-A Thermal Event Plume Analysis (TN 268433) only modeled hydrogen chloride, hydrogen fluoride, hydrogen cyanide, benzene, toluene, sulfur dioxide, nitrogen dioxide and carbon monoxide impacts. However, a review of the literature indicates that other toxic air contaminants (TACs), such as particulate matter, acrolein, formaldehyde, ultrafine particulates, phosphoryl fluoride, and carbonyl fluoride would also be released, even though they are not available from the UL 9540A test report. Staff needs additional analysis of the worst-case impacts during a potential BESS thermal runaway/fire event.

SDR TR-5: Please provide a revised impact analysis of all the potential criteria air pollutants and TACs mentioned above using available representative data from the literature review or measured from any BESS test and confirm that the data reflects the specific battery chemistry proposed.

SDR TR-6: If the modeling data originates from literature review, please provide a technical justification demonstrating that the data are representative and conservative for worker, responder, and public exposure conditions, and provide a copy of the referenced literature. If the modeling data comes from a BESS test, please also provide the specific analytical method(s) for determining the presence of off-gassing constituents in the test, including sample collection methods, laboratory preparation methods, analytical methods, the MDL (method detection limit) or PQL (practical quantitation limit) or RL (reporting limit) for all measured constituents, and all QA/QC (quality assurance/quality control) data including results of a spiked sample.

Generator Use Data Requests:

Tables 5 and 6 of Air Quality and Greenhouse Gas Technical Report (TN 263284) indicate that portable generator sets and air compressors will be used during multiple construction phases, with several stages overlapping. The Yolo-Solano Air Quality Management District has raised concerns regarding the 12-month Portable Equipment Registration Program (PERP) limitation and portability requirements in order to determine whether District Authority to Construct/Permit to Operate permitting may be required, if not for the CEC's in lieu authority.

SDR AQ-1: For all generator sets and air compressors identified in Table 6, please provide the engine make, model, horsepower and emission tiers.

SDR AQ-2: Please clarify unit usage across stages, mobilization/demobilization dates, continuous onsite presence, and total cumulative duration for each unit.

SDR AQ-3: For the 304-day Generator-Only Phase, please confirm whether the two generator sets are newly mobilized units or the same units used in earlier stages, and whether their total cumulative onsite duration (including

prior stages) would exceed 12 months. Please confirm whether the applicant would accept a condition of certification restricting the total cumulative onsite duration of the generators to a maximum of 12 months.

SDR AQ-4: Please confirm whether generators and air compressors will be relocated within the site, whether any unit will remain fixed in one location for extended periods, and how PERP portability requirements will be met.

Land Use:

SDR LAND-1: The application states Pacific Gas and Electric Company (PG&E) would design, construct, own, and operate the portion of the gen-tie line from the change of ownership (POCO) to the point of interconnection (POI) at the Vaca-Dixon Substation, including the final five structures and the I-80 crossing, and the New Corby Bay. Once operational, PG&E would transfer ownership of the POCO structure south of I-80 to the applicant. Per California Code of Regulations, Title 20, Appendix B (i) (3), please identify the steps PG&E has taken, including a schedule for obtaining easements, permits, or agreements outside the authority of the CEC, that would be necessary to complete interconnection of the project from the POCO to the POI. This should include, without limitation, the status of PG&E's ability to cross over the Solano Irrigation District (SID) canal, any Solano County Water Agency facility, creek, or drain, and coordination with Caltrans for the I-80 crossing.

Visual Resources:

Project Description Update #2, Part 2 states that two (2) current limiting reactors (CLRs) would be visible from KOPs 2a, 3, 7a, and 7b. However, when comparing the new simulations for KOPs 2a, 3, 7a, and 7b with the previous simulations, the locations of the two CLRs are not clear.

SDR VIS-1: Please provide additional information/guidance as to where, precisely, the CLRs are located in simulations 2a, 3, 7a, and 7b.

The Project Description Update #2, Part 2, Table 3.1-1 identifies the following dimensions for the CLRs: 25 feet in height and 10 feet in width.

SDR VIS-2: Please clarify if the 10-foot-wide dimension means 10 feet in diameter.

The Project Description Update #2, Part 2 states on Page 2 that…*"The Project will continue to not include lighting."* This statement contradicts the Application's previous description of lighting, which is: "*Low-elevation (i.e., less than 14-foot), controlled security lighting will be installed at primary access gates and the onsite substation. The lighting will only switch on when personnel enter the area (through either motion sensor or manual activation [i.e., switch]). Lighting features will only be installed in areas where it is required for safety, security, or operations. All lighting will be directed onsite and will include shielding as necessary to direct light downward and minimize illumination of the night sky or potential impacts to surrounding viewers."*

SDR VIS-3: Please clarify the apparent discrepancy in the description of lighting between the original application and the current update.

Fire Protection:

The application references compliance with the 2023 Edition of NFPA 855, even though the 2026 Edition (adopted September 2025) is the applicable standard. It is unclear whether the project design, hazard mitigation measures, and operational protocols have been reviewed for consistency with the 2026 requirements. The application does not indicate that a gap analysis has been performed between the 2023 and 2026 editions. Clarification is needed to confirm that the project will meet the applicable fire and life safety requirements.

> **SDR FP-1:** Please evaluate the differences between the 2023 and 2026 Editions of NFPA 855 as they apply to the proposed BESS and explain how the project would comply with the 2026 Edition. Please also provide similar evaluations for the 2026 Edition of NFPA 850 and UL 1741 (3rd Edition, including Supplement SB), and describe how the project would comply with those requirements.

The application relies on compliance with the 4th Edition of UL 9540A (published November 12, 2019), which the site-specific HMA identifies as the governing test standard. The 5th Edition of UL 9540A was published March 12, 2025, and includes revisions relevant to hazard characterization and mitigation measures. It is unclear whether the UL 9540A testing conducted in late 2024 is consistent with the 5th Edition requirements. Clarification is needed to ensure that the fire and explosion hazard evaluation reflects the current updated standard.

> **SDR FP-2:** Please evaluate the differences between the 4th and 5th Editions of UL 9540A as they apply to the proposed BESS and the UL 9540A testing conducted in late 2024. Identify any substantive differences, and explain whether or not a supplemental analysis or additional testing will be conducted and provided to demonstrate compliance with the 5th Edition.

Inconsistent statements regarding the Energy Storage Management System (ESMS)/Programmable Logic Controller (PLC) certification status are found in Project Description Update #2, Part 2 [TN 268433]. Appendix 3.9-B1, §2.3, page 13 states that the ESMS/PLC is certified to IEC 61131-2 and IEC/UL 61010-2-201; however, a footnote indicates that certifications were not provided for review because an ESMS/PLC model has not yet been selected. Clarification is necessary to understand how compliance with referenced certification standards will be ensured if the equipment has not been identified. Staff is reviewing these supplemental submittals with the understanding that the model has already been selected.

> **SDR FP-3:** Please inform staff of the exact model selected or clarify the status of and timeline for the ESMS/PLC selection and certification.

Staff seeks clarification regarding whether deflagration panels are included in the proposed design and, if so, to explain their role within the explosion protection strategy. The application references deflagration panels in several sections, including in discussions of NFPA 69 compliance; however, neither the Explosion Prevention System Design Report (TN 268433, Appendix 3.9-D) nor the Product HMA (TN268433, Appendix 3.9-B2) describes or evaluates deflagration panels as part of the system design. The Large Scale Fire Test (LSFT) also references deflagration

panels, but photos of the systems tested do not appear to include them.

> **SDR FP-4:** Please clarify whether deflagration panels are included in the proposed BESS design. If so, please include consistent figures and statements of their location, design basis, and how they are integrated into the NFPA 69 explosion protection approach, including any supporting calculations or evaluations.

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