PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

July 2, 2025

David Sweet
Plant Manager
44920 Lone Butte Road
Mojave, CA 92262

SUBJECT: **Generation and Energy Storage Audit of Edwards Sanborn Solar and Battery Energy Storage, Audit Number: GA2025-08ES**

Dear Mr. Sweet:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Evan Coughran, Emmanuel Salas, and Joseph Ling of ESRB staff conducted a generation and energy storage audit of Edwards Sanborn Solar and Battery Energy Storage from April 21 through April 24, 2025.

During the audit, ESRB observed plant operations, inspected equipment, reviewed data, interviewed plant staff, and identified potential violations of General Order (GO) 167-C. A copy of the audit findings itemizing the violations is attached. Please advise me by email no later than July 31, 2025, by providing an electronic copy of all corrective actions and preventive measures taken and/or planned to be taken to resolve the violations.

Your response should include a Corrective Action Plan with a description and completion date of each action and measure completed. For any violations not corrected, please provide the projected completion dates to correct the violations and achieve full compliance with GO 167-C.

Please submit your response to Evan Coughran at evan.coughran@cpuc.ca.gov. Please note that although Edwards Sanborn Solar and Battery Energy Storage has been given 30 days to respond, it has a continuing obligation to comply with all applicable GO 167-C requirements; therefore, the response period does not alter this continuing duty.

The CPUC intends to publish the audit report of Edwards Sanborn Solar and Battery Energy Storage on the CPUC website. If you wish to make a claim of confidentiality covering any of the information in the report, you may submit a confidentiality request pursuant to Section 14.4 of GO 167-C, using the heading “General Order 167-C Confidentiality Claim" along with such redactions. The request and redacted version of the audit report should be sent to Evan Coughran with a copy to me and the GO-167 inbox GO167@cpuc.ca.gov by July 31, 2025.

Please note that ESRB will also post the Edwards Sanborn Solar and Battery Energy Storage audit report response on the CPUC website. If there is any information in your response that you would like us to consider as confidential, we request that in addition to your confidential response, you provide us with a redacted version of your audit response that can be posted on the CPUC website.

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

Thank you for your courtesy and cooperation throughout the audit process. If you have any questions concerning this audit, please contact Evan Coughran at evan.coughran@cpuc.ca.gov or (213) 819-6803.

Sincerely,

Banu Acimis, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Attachment: CPUC Generation and Energy Storage Audit Findings

Cc: Lee Palmer, Director, Safety and Enforcement Division (SED), CPUC
Eric Wu, Program Manager, ESRB, SED, CPUC
Stephen Hur, Senior Utilities Engineer - Supervisor, ESRB, SED, CPUC
Joseph Ling, Senior Utilities Engineer, ESRB, SED, CPUC
Evan Coughran, Utilities Engineer, ESRB, SED, CPUC
Emmanuel Salas, Utilities Engineer, ESRB, SED, CPUC

CPUC AUDIT FINDINGS OF EDWARDS SANBORN SOLAR AND BATTERY ENERGY STORAGE APRIL 21 – APRIL 24, 2025

I. Findings Requiring Corrective Actions.

Finding 1: Edwards Sanborn Solar and Battery Energy Storage (Edwards Sanborn) must improve the work order management system used for substation maintenance activities.

General Order (GO) 167-C, Appendix C, Maintenance Standard (MS) 4: Problem Resolution and Continuing Improvement states:

> *"The company values and fosters an environment of continuous improvement, timely and effective problem resolution, and problem prevention. This can be accomplished by applying industry best practices, lessons learned, and proven safety measures for the safety and reliability of both the GA and ESS."*

GO 167-C, Appendix C, MS 10: Work Management states:

> *"Work is identified and selected based on priority to maintaining reliable facility operation. Work is planned, scheduled, coordinated, controlled, and supported with resources for safe, timely, and effective completion."*

During the audit, Electric Safety and Reliability Branch (ESRB) inspectors reviewed the maintenance tracking practices used by the site's high voltage maintenance team that conducts the maintenance for the substation and found that the current work order management system lacks the structure necessary to effectively plan and document high voltage work. The maintenance team responsible for the substation currently uses Microsoft Teams to track maintenance activities; however, this platform is not designed to function as a formal work order management system and does not provide the necessary capabilities for tracking, scheduling, or documentation. Edwards Sanborn must implement a formalized work order management system for high voltage substation maintenance that supports proper planning, execution, and recordkeeping of all completed and upcoming work. Edwards Sanborn must develop and submit a plan of action to ESRB for review and verification.

Finding 2: Edwards Sanborn must improve documentation control and standardize data collection practices for high voltage substation activities.

GO 167-C, Appendix C, MS 4: Problem Resolution and Continuing Improvement states:

> *"The company values and fosters an environment of continuous improvement, timely and effective problem resolution, and problem prevention. This can be accomplished by applying industry best practices, lessons learned, and proven safety measures for the safety and reliability of both the GA and ESS."*

GO 167-C, Appendix C, MS 8: Maintenance Procedures and Documentation states:

> *"Maintenance procedures and documents are clear and technically accurate, provide appropriate directions, and are used to support safe and reliable facility operation. Procedures must be current to the actual methods being employed to accomplish the task and are comprehensive to ensure reliable energy delivery to the transmission grid."*

GO 167-C, Appendix E, Operating Standard (OS) 17: Records of Operation states:

> *"The GAO or ESSO assures that data, reports, and other records reasonably necessary for ensuring proper operation and monitoring of the GA or ESS are collected by trained personnel and retained for at least five years, and longer if appropriate."*

During the audit, ESRB inspectors reviewed the maintenance records for the substation and high voltage work and identified inconsistencies in how data is collected and documented. The team responsible for high voltage work in the substation missed various substation daily inspection entries. When recording oil level checks, personnel used inconsistent entry formats such as describing levels as "OK" and "Good" in some inspections or listing numerical values for others. In another instance, personnel initially recorded battery test results as "Fail" but later added data points without including any notes explaining the failure or describing corrective actions taken. These inconsistent practices prevent Plant personnel from disseminating accurate equipment condition, evaluating maintenance status, and confirming whether abnormal conditions are resolved. Edwards Sanborn must strengthen documentation control, ensure that staff record all required inspections consistently, and adopt standardized data entry formats. Edwards Sanborn must submit a corrective action plan to ESRB for review and verification.

Finding 3: ESRB inspectors observed out-of-date tags on operational equipment.

GO 167-C, Appendix D, MS 9: Conduct of Maintenance states:

> *"Maintenance is conducted in an effective and efficient manner so equipment performance and materiel condition effectively support reliable plant operation."*

GO 167-C Appendix E, OS 9: Engineering and Technical Support states:

> *"Engineering activities are conducted such that equipment performance supports reliable plant operation. Engineering provides the technical information necessary for the plant to be operated and maintained within the operating parameters defined by plant design. Engineering provides support, when needed, to operations and maintenance groups to resolve operations and maintenance problems."*

GO 167-B Appendix E, OS 11: Operations Facilities, Tools and Equipment states:

> *"Facilities and equipment are adequate to effectively support operations activities."*

ESRB staff observed that BESS Unit 44B8 of E2 had an active "do not operate" tag despite it being in operation at the time of inspection. The tag was significantly faded with critical

information illegible or filled out incorrectly at time of hanging. Site personnel confirmed the tag was associated with prior maintenance activity that had since been completed. The documentation was reviewed by Plant and ESRB staff, and it was verified by both teams that the unit had been properly cleared for return to service per site procedures, but the physical tag had not been removed until ESRB's audit.

This condition presents a serious operational and safety risk, as the presence of a "do not operate tag" on an active unit can lead to confusion regarding the equipment's status and integrity. Illegible and outdated tags also limit the reliability and usefulness of other tags. Edwards Sanborn must review its tagout and clearance verification protocols to ensure physical tags are removed once equipment is returned to service and paperwork is closed out. Edwards Sanborn must also implement a process for routine inspection and replacement of field tags to ensure tags remain legible.

Figure 1: Tag missing critical information.

<u>Finding 4: Edwards Sanborn must update the Spill Prevention, Control, and Countermeasure (SPCC) plan to accurately reflect the location of the operations building.</u>

GO 167-C, Appendix D, OS 8: Plant Status and Configuration states:

> *"Facility activities are effectively managed, so the facility status and configuration are maintained to support safe, reliable, and efficient operation."*

During the audit, ESRB inspectors reviewed the facility's SPCC Plan and found that the site layout maps included in the plan reference office buildings that do not exist at the solar site. The

actual operations building is located offsite, but the SPCC map does not accurately reflect this. Edwards Sanborn must revise the SPCC to reflect the current configuration of the site and accurately identify the location of all relevant structures, including the operations building. Edwards Sanborn must submit the revised SPCC, including updated maps, to ESRB for review and verification.

Finding 5: ESRB inspectors found expired inventory in the first-aid kit of the main operation building.

GO 167-C, Appendix D, MS 1: Safety states in part:

> *"The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site. The company behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority."*

GO 167-C, Appendix E, OS 13: Routine Inspection states in part:

> *"Routine inspections by plant personnel ensure that all areas and critical parameters of plant operations are continually monitored, equipment is operating normally, and that routine maintenance is being performed. Results of data collection and monitoring of parameters during routine inspections are utilized to identify and resolve problems, to improve plant operations, and to identify the need for maintenance. All personnel are trained in the routine inspections procedures relevant to their responsibilities. Among other things, the GAO creates, maintains, and implements routine inspections by:*
>
> *B. Establishing procedures for routine inspections that define critical parameters of these systems, describe how those parameters are monitored, and delineate what action is taken when parameters meet alert or action levels."*

ESRB inspectors observed that the first aid kit in the main operations building contained expired inventory. All first aid kits at Edwards Sanborn must be routinely inspected to ensure that the kits contain their proper inventory and that any expired medication is swiftly replaced.

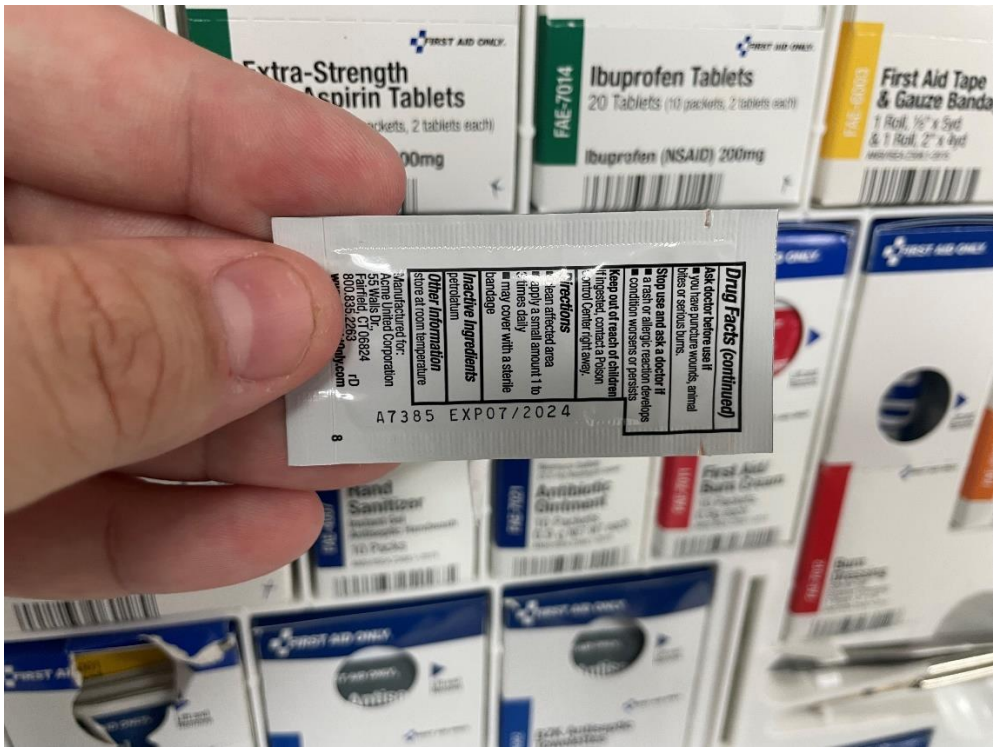

Figure 2: First aid kit in the main operations building with expired medical supplies.

Finding 6: ESRB inspectors observed emergency exit lights at the substation that did not illuminate when tested.

GO 167-C, Appendix D, MS 1: Safety states in part:

"The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site. The company behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority..."

GO 167-C, Appendix D, MS 9: Conduct of Maintenance states:

"Maintenance is conducted in an effective and efficient manner so equipment performance and materiel condition effectively support reliable plant operation."

GO 167-C, Appendix E, OS 8: Plant Status and Configuration states:

"Station activities are effectively managed so plant status and configuration are maintained to support safe, reliable and efficient operation."

GO 167-C, Appendix E, OS 13: Routine Inspections states:

"Routine inspections by plant personnel ensure that all areas and critical parameters of plant operations are continually monitored, equipment is operating normally, and that routine maintenance is being performed. Results of data collection and monitoring of parameters during routine inspections are utilized to identify and resolve problems, to improve plant operations, and to identify the need for maintenance."

ESRB inspectors observed that the emergency exit lights did not illuminate when tested in the substation. Emergency exit lights are essential to ensure Plant personnel can safely egress the Plant in the event of an emergency. Edwards Sanborn must conduct regular inspections and testing of the emergency exit lights and ensure they are in proper working condition. This includes monthly functional testing, annual comprehensive functional testing and maintaining written records for all inspection and tests. During the audit, Edwards Sanborn was able to rectify the issues with the substation emergency exit lights showing ESRB inspectors that they were operational and identifying the issue as a connection problem that occurred during construction. Edwards Sanborn must establish a regular inspection plan or work order for emergency exit lights and submit it to ESRB.

Figure 3: Nonfunctioning emergency lighting in substation.

Finding 7: ESRB inspectors observed fire extinguisher signs in and around the storage warehouse missing their associated fire extinguishers.

GO 167-C, Appendix D, MS 1: Safety states in part:

> *"The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site. The company behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority."*

GO 167-C, Appendix E, OS 13: Routine Inspection states in part:

> *"Routine inspections by plant personnel ensure that all areas and critical parameters of plant operations are continually monitored, equipment is operating normally, and that routine maintenance is being performed. Results of data collection and monitoring of parameters during routine inspections are utilized to identify and resolve problems, to improve plant operations, and to identify the need for maintenance. All personnel are trained in the routine inspections procedures relevant to their responsibilities. Among other things, the GAO creates, maintains, and implements routine inspections by:*

B. Establishing procedures for routine inspections that define critical parameters of these systems, describe how those parameters are monitored, and delineate what action is taken when parameters meet alert or action levels."

ESRB inspectors observed fire extinguisher signs in and around the storage warehouse that did not have a fire extinguisher. It is essential that all signage around Edwards Sanborn is accurate and allows personnel to quickly find fire extinguishers in the event of an emergency. Edwards Sanborn expressed that the inaccurate fire extinguisher signage was a relic from the building's previous use, before they had taken control of it, and was left during Edwards Sanborn' construction. During ESRB's audit of Edwards Sanborn plant staff were able to rectify this finding by removing the inaccurate signage while maintaining the accurate signage of the fire extinguisher that was ready for use.

Figure 4: Fire extinguisher sign on outside of the storage warehouse with no fire extinguisher.

Figure 5: Fire extinguisher sign inside of the storage warehouse with no fire extinguisher.

Finding 8: Various fire extinguishers are missing monthly inspection tags.

GO 167-C, Appendix D, OS 1: Safety states:

> *"The protection of life and limb for the work force is paramount. GAOs and ESSOs have a comprehensive safety program in place at each site. The company's behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment and the policies and procedures foster such a safety culture, and the attitudes and behaviors of personnel are consistent with the policies and procedures."*

GO 167-C, Appendix D, OS 17: Records of Operation states:

> *"The GAO or ESSO assures that data, reports, and other records reasonably necessary for ensuring proper operation and monitoring of the GA or ESS are collected by trained personnel and retained for at least five years, and longer if appropriate."*

During the site inspection, ESRB inspectors observed that fire extinguishers in the warehouse were missing monthly inspection tags. While the extinguishers displayed current annual service tags, the absence of separate monthly inspection tags makes it difficult to verify whether personnel are performing the required monthly checks. Edwards Sanborn must ensure that all fire extinguishers are equipped with current monthly inspection tags and that personnel complete monthly signoffs as required. Edwards Sanborn must submit photographic evidence of the installed tags to ESRB for review and verification.

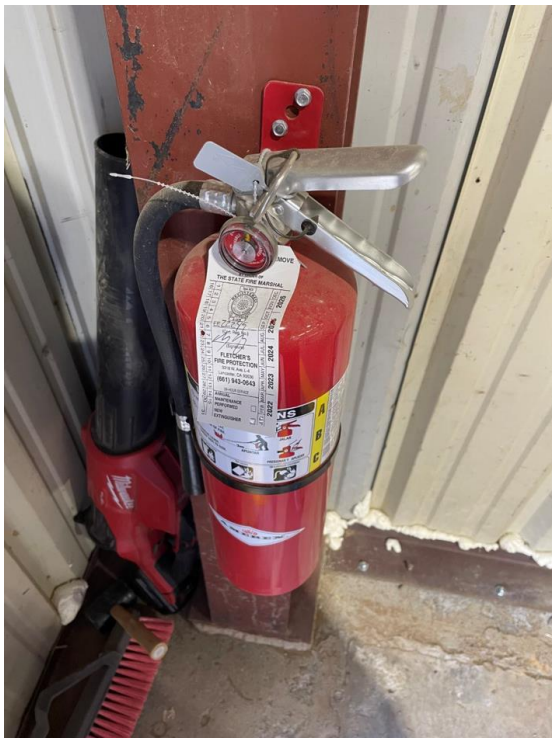

Figure 6: Fire extinguisher with a missing monthly inspection tag.

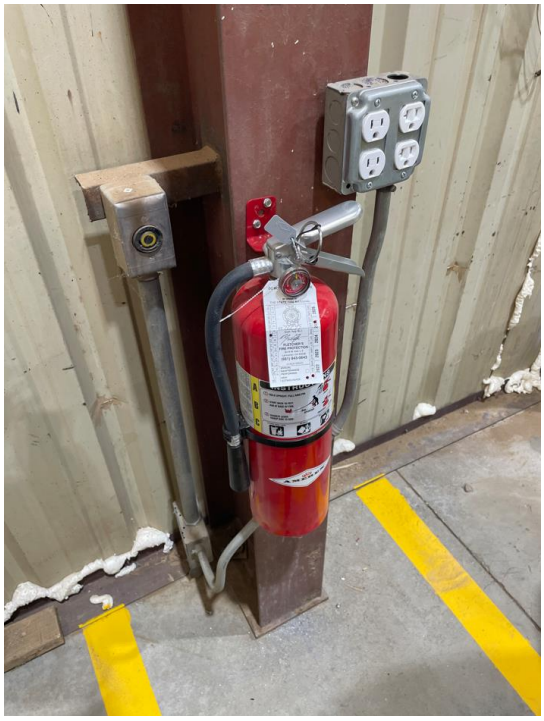

Figure 7: Fire extinguisher with a missing monthly inspection tag.

Finding 9: The site map does not identify muster points for the main operations building and surrounding structures.

GO 167-C, Appendix D, OS 1: Safety states:

> *"The protection of life and limb for the work force is paramount. GAOs and ESSOs have a comprehensive safety program in place at each site. The company's behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment and the policies and procedures foster such a safety culture, and the attitudes and behaviors of personnel are consistent with the policies and procedures."*

GO 167-C, Appendix D, OS 20: Preparedness for On-Site and Off-Site Emergencies states in part:

> *"The GAO or ESSO plans for, prepares for, and responds to reasonably anticipated emergencies on and off the plant site, primarily to protect facility personnel and the public, and secondarily to minimize damage to maintain the reliability and availability of the facility. Among other things, the GAO or ESSO:*
>
> *c) Ensures provision of emergency information and materials to personnel."*

ESRB inspectors noted that the facility did not have a site or evacuation map for the main operations building area that clearly identified and labeled muster points for this area and the surrounding structures. Personnel may not know where to assemble during an emergency if the site lacks a clear map and designated muster points. Edwards Sanborn must develop an evacuation map for the main operations area that clearly identifies all muster points for the building and adjacent structures. Edwards Sanborn must submit the revised map to ESRB for review and verification.

Finding 10: Edwards Sanborn must update the Emergency Response Plan (ERP) contact list and ensure all posted ERP documents reflect the revised information.

GO 167-C, Appendix D, OS 20: Preparedness for On-Site and Off-Site Emergencies states in part:

> *"The GAO or ESSO plans for, prepares for, and responds to reasonably anticipated emergencies on and off the plant site, primarily to protect facility personnel and the public, and secondarily to minimize damage to maintain the reliability and availability of the facility."*

During the documentation review, ESRB inspectors reviewed the ERP and found that the contact list included outdated contact information. Edwards Sanborn must update the contact list and must also ensure that all ERP documents posted throughout the facility reflect the revised information. Edwards Sanborn must submit the updated ERP for review and verification.

Finding 11: Edwards Sanborn did not maintain a copy of the ERP in the site's fire alarm control cabinet as required.

GO 167-C, Appendix D, OS 20: Preparedness for On-Site and Off-Site Emergencies states in part:

> *"The GAO or ESSO plans for, prepares for, and responds to reasonably anticipated emergencies on and off the plant site, primarily to protect facility personnel and the public, and secondarily to minimize damage to maintain the reliability and availability of the facility. Among other things, the GAO or ESSO:*
>
> *c) Ensures provision of emergency information and materials to personnel."*

Figure 8: Fire alarm control cabinet with no ERP.

During the audit, ESRB inspectors noted that the site's fire alarm control cabinet did not contain a copy of the Emergency Response Plan, as required by Edwards Sanborn fire protection emergency response plan. The absence of the ERP in this location may delay access to critical response information during an emergency. Edwards Sanborn must place a current copy of the ERP in the fire alarm control cabinet and submit photographic documentation of the completed action to ESRB for review and verification.

Finding 12: ESRB inspectors observed hazardous waste and gas cylinders improperly stored.

GO 167-C, Appendix D, MS 1: Safety states in part:

> *"The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site. The company behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority..."*

GO 167-C, Appendix D, MS 9: Conduct of Maintenance states:

> *"Maintenance is conducted in an effective and efficient manner so equipment performance and materiel condition effectively support reliable plant operation."*

GO 167-C, Appendix E, OS 8: Plant Status and Configuration states:

> *"Station activities are effectively managed so plant status and configuration are maintained to support safe, reliable and efficient operation."*

GO 167-C, Appendix E, OS 13: Routine Inspections states:

> *"Routine inspections by plant personnel ensure that all areas and critical parameters of plant operations are continually monitored, equipment is operating normally, and that routine maintenance is being performed. Results of data collection and monitoring of parameters during routine inspections are utilized to identify and resolve problems, to improve plant operations, and to identify the need for maintenance."*

ESRB inspectors observed hazardous waste and gas cylinders, leftover from construction, improperly stored behind the storage warehouse. Hazardous material must be properly logged and stored in hazardous waste collection areas marked with their collection date. Edwards Sanborn must ensure that all hazardous waste and gas cylinders are properly stored and accounted for. Edwards Sanborn removed the hazardous waste and gas cylinders while ESRB inspectors were conducting the audit.

Figure 9: Hazardous waste and gas cylinders improperly stored.

II. List of Reviewed Documents

Category	Reference #	CPUC-Requested Documents
Safety	1	Orientation Program for Visitors and Contractors**
	2	Evacuation Procedure
	3	Evacuation Map and Plant Layout
	4	Evacuation Drill Report & Critique (last 3 years)
	5	Hazmat Handling Procedure
	6	MSDS for All Hazardous Chemicals
	7	Injury & Illness Prevention Plan (IIPP) (last 3 years)
	8	OSHA Form 300 (Injury Log) in last 4 years
	9	OSHA Form 301 (Incident Report) in last 4 years
	10	List of all CPUC Reportable Incidents (last 5 years)
	11	Root Cause Analysis of all Reportable Incidents (if any)
	12	Fire Protection System Inspection Record and Fire Sprinklers Test Report (last 3 years)
	13	Insurance Report / Loss Prevention / Risk Survey (last 3 years)
	14	Lockout / Tagout Procedure (last 3 revisions, if applicable)
	15	Arc flash Analysis
	16	Confined Space Entry Procedure
	17	Plant Physical Security and Cyber Security Procedures and Records
Training	18	Safety Training Records*
	19	Skill-related Training Records*
	20	Certifications for Welders, Forklift & Crane Operators*
	21	Hazmat Training and Record*
Contractor	22	Latest list of Qualified Contractors*
	23	Contractor Selection / Qualification Procedure
	24	Contractor Certification Records
	25	Contractor Safety Program Procedure and Training Records
Regulatory	26	Water Permit (if applicable)
	27	Spill Prevention Control Plan (SPCC) (if applicable)
	28	CalARP Risk Management Plan (RMP)

O&M	29	Daily Round Sheets / Checklists
	30	Logbook**
	31	List of Open/Backlogged Work Orders*
	32	List of Closed/Retired Work Orders (last 3 years)*
	33	Work Order Management Procedure (last 3 revisions, if applicable)
	34	Computerized Maintenance Management System (Demonstration On-site)**
	35	All Root Cause Analyses (if any)
	36	Maintenance & Inspection Procedures, or Related Documents (last 3 revisions, if applicable)
	37	SCADA system (Demonstration On-site)**
	38	Maintenance and Inspection Records for Solar Inverters
	39	Maintenance and Inspection Records for Solar Trackers
	40	Maintenance and Inspection Records for Solar Arrays/Collectors/Solar Field
	41	Maintenance and Inspection Records for Mounting System
	42	Maintenance and Inspection Records for Switchgear/breaker/relays
	43	Maintenance and Inspection Records for Electrical System
	44	Maintenance and Inspection Records for Main Transformer(s)
	45	Maintenance and Inspection Records for Switchyard & Transmission Equipment
	46	Maintenance and Inspection Records for other equipment
	47	Transformer Oil Analysis Records (last 3 years)
	48	Emergency Generator Test and Maintenance Records (last 3 years)
	49	Substation Battery Test and Maintenance Records (last 3 years)
	50	Vegetation Management Procedure and Policy
B.E.S.S.	51	Maintenance and Inspection Procedures, or Related Documents
	52	Maintenance and Inspection Records
	53	Compliance Capacity Testing Records
	54	Fire Suppression System Inspection and Testing Logs
	55	Original Equipment Manufacturer (OEM) Manual
	56	Thermal Management System Inspection Records
	57	BESS Emergency Action Plan
	58	Training and Emergency Drills with Local First Responders Records
	59	Failure Modes and Effects Analysis (FMEA) or Hazard Analysis
	60	Operations Procedure
	61	Thermal Imaging and Hotspot Detection Reports

Documents	62	P&IDs*
	63	Vendor Manuals*
	64	Solar Farm Equipment Design Data
	65	Procedure Compliance Policy
Spare Parts	66	Spare Parts Inventory List
	67	Shelf-life Assessment Report
Management	68	Organizational Chart
Instrumentation	69	Instrument Calibration Procedures and Records
Test Equipment	70	Measuring & Testing Equipment List
	71	Test Equipment Calibration Procedures and Records
Internal Audit	72	Internal Audit Procedures and all Records

Note: If a requested document is not applicable or not available, please indicate as such in your response.

* Provide data in a searchable format such as a searchable PDF, Word Document, Excel Spreadsheet, etc.

** These items may be provided on-site by the first day of the audit.