

Battery Energy Storage System Facilities Development Standards Comparison Table					
Land Use/Planning Development Standards for BESS Facilities	Proposed BESS Facility Ordinance	Preliminary Draft BESS Model Ordinance and Guide (In Progress: Developing a guide to assist local permitting authorities with the development of their own ordinances and regulations for utility-scale BESS)	Current Permitting Process for BESS Facilities: 1) Planning/Zoning - Permitted as Minor or Major Impact Utilities 2) Fire Code & Interim Fire Protection Guidelines for BESS Facilities (In Progress: Developing Land Use/Planning Development Standards for BESS Facilities)	Current Permitting Process for BESS Facilities (as of June 24, 2025): 1) Planning/Zoning - Permitted as Electric Distribution Substation 2) Fire Code - Electrical Energy Storage Systems (ESS) (In Progress: Updating Renewable Energy Ordinance in Zoning Code to include BESS regulations)	Adopted Energy Storage Facilities Ordinance
Development Standards	County of Orange	State of California	County of San Diego	County of Los Angeles	City of Menifee
Applicability	All BESS facilities not subject to California Energy Code, Title 24, Part 6 or being processed through the California Energy Commission Opt-In Certification Program	BESS Facilities with capacity ≥ 1 MWh	All BESS facilities	BESS facilities with capacity greater than 3 kWh	Utility-Scale BESS facilities
Approvals	Use Permit to the Planning Commission	Land Use Designation requiring issuance of Use Permit (Discretionary) -Prime Agricultural Land, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance -Residential -Mixed-Use -Public Lands/Open Space/Recreation Land Use Designation By-Right (Ministerial) -Agricultural (others not listed above) -Industrial -Commercial	Minor Use Permit to Director for Administrative Approval or Major Use Permit to Planning Commission for Approval	Ministerial Review or Conditional Use Permit to the Planning Commission (depending on the zone)	Conditional Use Permit to the Planning Commission
Relation to Other Codes	Compliance with Building and Safety Codes and adopted Fire Code by reference	Compliance with requirements of the California Fire Code (CFC)	Compliance with Building and Safety Codes, adopted Fire Code, and Interim Fire Protection Guidelines for BESS facilities	Compliance with Building and Safety Codes and adopted Fire Code by reference	Compliance with Building and Safety Codes and adopted Fire Code by reference
Battery Technology Requirements	Specific battery technology is not required	Specific battery technology is not required, but will require compliance with CFC	Specific battery technology is not required	Specific battery technology is not required	Specific battery technology is not required
Siting Requirements	Allowed in all zoning districts Not allowed in very high fire severity area	Allowed in the following: Agricultural, Industrial, Commercial, Residential, Mixed-Use, Public Lands	—	Allowed in the following zones: Commercial Highway, Restricted Commercial, Neighborhood Commercial, General Commercial, Commercial Manufacturing, Major Commercial, Rural Commercial, Rural Mixed Use Development, Light Manufacturing	Restricted to Business Park and Heavy Industrial Zones
Distance from Residential Uses and Community Facilities	100 feet or deviation request subject to review and approval by the Planning Commission	Compliance with latest CFC of 10 feet.	Minimum 100-foot setback from property lines	10 feet setback from property lines and buildings	—
Perimeter Wall Height	Visible: Minimum 6-foot Solid Walls (non-scalable) Not Visible from Public View: Minimum 6-foot Solid Walls or tubular steel or wrought iron fencing (non-scalable)	Physical security requirements, such as perimeter fenced, security, barriers, and buffering consistent with any CFC and CA Code of Regulations requirements must be installed. <u>Note</u> 2022 CA Code of Regulations requires enclosures for high-voltage electrical installations to be secured with a minimum 8-foot fence. 2023 NFPA 70 requirements require a perimeter fence of at least 7 feet in height around a BESS facility. 2022 CFC requires BESS to be secured against unauthorized entry.	—	Minimum 8 feet Masonry Wall	Visible: Minimum 6-foot Solid Walls (non-scalable) Not Visible from Public View: Minimum 6-foot Solid Walls or tubular steel or wrought iron fencing (non-scalable)
Perimeter Wall Aesthetics	Require decorative walls (may be customized to the community) Anti-graffiti measured required	—	—	Masonry Wall or Other Substitution approved by the Planning Commission	Require decorative walls (may be customized to the community) Anti-graffiti measured required
Landscaping	Interior Side: No landscaping required Perimeter: Landscaping required to meet district setbacks and shall not conflict with OCFA vegetation management requirements	Compliance with CFC vegetation management plan through consultation with local fire authority.	—	Areas within 10 feet on each side of outdoor ESS shall be cleared of combustible vegetation and other combustible growth. Single specimens of trees, shrubbery or cultivated ground cover such as green grass, ivy, succulents or similar plants used as ground cover shall be permitted to be exempt provided that they do not form a means of readily transmitting fire.	Interior Side: No landscaping required Perimeter: Landscaping required to meet district setbacks and requirements
Equipment Height	Not to exceed 6-foot screenwall height for non-enclosed equipment Enclosed equipment not to exceed 15 feet Utility Poles or utility connection equipment, substation switchyard and similar equipment may exceed 15 feet	—	—	—	Not to exceed 6-foot screenwall height for non-enclosed equipment Enclosed equipment not to exceed 15 feet Utility Poles or utility connection equipment, substation switchyard and similar equipment may exceed 15 feet
Equipment Enclosure	Compliance with California Fire Code (CFC)	Compliance with CFC	Specific technical requirements provided in the Interim Fire Protection Guidelines for BESS Facilities	Enclosures of ESS shall be of noncombustible construction. Enclosures are as defined and/or determined by the fire code official.	Required in Business Park zone
Parking	Unoccupied Site: 1 parking space Occupied Site: Comply with off-street parking requirements for non-residential uses per Zoning Code Sec. 7-9-70.6	—	—	—	Unoccupied Site: 1 parking space Occupied Site: 1 parking space per employee
Lighting	Comply with lighting and illumination requirements per Zoning Code Sec. 7-9-67	Optional, but if required, lighting shall comply with CFC	—	—	—
Signage	Comply with signage requirements per Zoning Code Sec. 7-9-114.4	The facility must provide safety signage that complies with CFC. Additional signage may be permitted if in compliance with local code.	Specific safety signage requirements	Specific safety signage requirements	Require approved signage plan

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Hazard Mitigation Analysis (HMA)	Require review and approval by OCFA prior to entitlement approval; approval of all design requirements is ultimately contingent on safety requirements specified by the HMA	A draft Hazard Mitigation Analysis is required for a land use permit application. Submission of the final HMA in accordance with CFC and adopted fire code following completion of final design plans shall be a condition of approval. HMA shall comply with CFC and adopted fire code	Require Hazard Mitigation Analysis (HMA) and Hazard Identification Analysis (HIA)	A failure modes and effects analysis (FMEA) or other approved hazard mitigation analysis	Require review and approval by City Fire Dept prior to entitlement approval; approval of all design requirements is ultimately contingent on safety requirements specified by the HMA
Emergency Response and Emergency Action Plan	Require compliance with Government Code Section 761.3 (Chapter 4 of Division 1 of the Public Utilities Code)	Require Emergency Response Plan. <u>Note</u> Battery energy storage systems of 20 MW or more or that occupies 10,000 square feet or more of physical space must prepare an Emergency Response Plan in adherence to California State Senate Bill 38 (Government Code Section 761.3 [Chapter 4 of Division 1 of the Public Utilities Code]).	Require Emergency Planning and Training Require annual training of site personnel and first responders Require component for cost recovery where owner reimburses emergency response services	—	—
Development Standard Deviation Requests	Subject to review and approval by Planning Commission	May allow for deviation in setback through applicant demonstration of safe modification to setback requirements	—	—	—
Commissioning Plan	—	Compliance with any commissioning plan requirements outlined in CFC. Must provide Operations and Maintenance Plan prior to the project going into service. <u>Note</u> 2022 CFC requires a commissioning plan to be approved prior to initiating commissioning. The commissioning plan must include details on fire and safety system testing and verification, the commissioning process and responsibilities, and documentation and training for operations and maintenance.	—	Required at permit application submittal	—
Decommissioning Plan	Require prior to building permit issuance Require submittal of updated decommissioning plan when changes to equipment warrants an update Require notification to the County upon ownership change	The code official should be notified prior to the decommissioning of a battery energy storage system. The decommissioning plan shall ensure that the facility is dismantled, removed, and the site restored to a condition reasonably similar to its original state once the system has reached the end of its useful life or is otherwise no longer in operation for a continuous period of 12 months. The energy system and all structures associated with it shall be removed within 6 months of the beginning of decommissioning.	—	Required at permit application submittal	Require prior to issuance of any permits related to decommissioning activities Require notification to the City upon ownership change
Financial Assurance for Decommissioning	Require prior to building permit issuance Require submittal of updated financial assurance when changes to equipment or ownership warrants an update	A cost estimate for implementing the decommissioning plan, along with financial assurances required for system removal. The financial assurance should include a bond, guarantee or letter of credit, and may be posted in increments (e.g. 25% at COD, 50% 5 years post COD, and 100% 10 years post COD)	—	—	—
Finding of Economic Benefit	Consistent with Public Resources Code section 25545.9; project to demonstrate overall net positive economic benefit to the County	—	—	—	Consistent with Public Resources Code section 25545.9; project to demonstrate overall net positive economic benefit to the City
Community Benefits Agreement	Consistent with Public Resources Code section 25545.10; owner/operator to enter into an agreement with the County	—	—	—	Consistent with Public Resources Code section 25545.10; owner/operator to enter into an agreement with the City
Performance Measures and Standard Conditions of Approval	Require to demonstrate compliance with all performance measures and Conditions of Approval	—	—	—	Require to demonstrate compliance with all performance measures and Conditions of Approval
Additional Technical Documents	As may be required by OCFA or County Building and Safety	—	Require to submit: 1) Comprehensive Study of the Projects Fire Code Compliance Including Interim Guidelines 2) Plume Modeling 3) Failure Scenario Analysis 4) Proposed Mitigation	Large-scale fire test and submittal of report. Require to submit with permit application: 1) Location and layout diagram of the room or area in which the ESS is to be installed 2) Details on the hourly fire-resistance ratings of assemblies enclosing the ESS 3) The quantities and types of ESS to be installed 4) Manufacturer's specifications, ratings and listings of each ESS 5) Description of energy (battery) management systems and their operation. 6) Location and content of required signage 7) Details on fire suppression, smoke or fire detection, thermal management, ventilation, exhaust and deflagration venting systems, if provided 8) Support arrangement associated with the installation, including any required seismic restraint 9) A commissioning plan 10) A decommissioning plan 11) Other information required by the code official	As may be required by Fire Authority or the City
Summary of Community Outreach and Education Efforts Undertaken/Planning by Applicant	—	Required submittal item	—	—	—
Sound	Comply with County Noise Control Regulations	Optional, but if required, sound shall comply with the auditory limits established for the local authority	—	—	Comply with City Noise Control Regulations

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Safety Systems Examples: -Detection and Alarm Systems -Exhaust Ventilation -Fire Supression -On-Site Water Requirements -Energy Storage Management System	Comply with all applicable standards of the adopted Building and Safety Codes and of the adopted Fire Codes	Compliance with CFC	Specific technical requirements provided in the Interim Fire Protection Guidelines for BESS Facilities	Compliance with adopted Fire Code	Comply with all applicable standards of the adopted Building and Safety Codes and of the adopted Fire Codes
Reference Information	Attachment 2 to this Staff Report	Preliminary Draft Not Available for Public Access	San Diego County Fire Protection District Interim Fire Protection Guidelines for BESS Facilities - May 15, 2025	Los Angeles County Code of Ordinances, Title 32 - Fire Code, 1207 - Electrical Energy Storage Systems (ESS)	City of Menifee Development Code, Title 9: Planning and Zoning, Article 5: Special Use Standards, Chapter 9.297 Energy Storage Facilities