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ENERGY STORAGE SYSTEMS
Requirements Handout #27

INTRODUCTION

The information in this handout provides general guidelines by the City of Covina to obtain construction permits for stationary Energy Storage System (ESS) installations and for mobile ESS charging and storage installations covered by the current code sections:

- 2025 California Residential Code (CRC)
- 2025 California Building Code (CBC)
- 2025 California Fire Code (CFC)
- 2023 Los Angeles County Fire Code (LACFC)
- 2025 California Electrical Code (CEC)

To obtain complete information for your project, please contact our friendly staff in-person or over the phone at: **Planning (626) 384-5450 or Building & Safety (626) 384-5460,**
Business hours (Monday - Thursday from 7:00 A.M. to 6:00 P.M.).

GENERAL REQUIREMENTS:

- Planning clearance is required prior to submission to Building Application for permit.
- Commercial energy storage systems must be designed by a licensed Electrical Engineer.
- If a photovoltaic system is also part of the installation, please refer to the City of Covina – Residential Submittal" checklist. Solar Photovoltaic (SPV) systems will be on a separate SPV permit.
- Disconnecting means shall be provided for all ungrounded conductors. The disconnecting means shall be readily accessible and on the exterior of the building.
- Ventilation. Provisions appropriate to the battery technology shall be made for sufficient diffusion and ventilation of gases from the battery, if present, to prevent the accumulation of an explosive mixture, per the manufacturer's instructions.
- ESS shall be installed in accordance with the manufacturer's installation instructions.
- When an SPV system is part of the ESS, show the location and/or method of rapid shutdown and the point of interconnection between the ESS and other power production sources.
- For the ESS, include a note on the plans that a plug-in type back-fed circuit breaker(s) connected to an interconnected supply shall be secured in accordance with *CEC 408.36(D)*
- Addresses indoor, outdoor and mobile situations.
- Rated enclosures including exterior walls. Fire protection-rated glazing is not allowed in fire barriers enclosing ESS.
- An automatic smoke detection system or radiant-energy detection system shall be installed in rooms, walk-in units and areas containing energy storage systems as required in CFC *Section 1206*.
- **LA County Fire** review and approval is required **prior** to permit issuance.
    - ***Exception****: Installations within R-3 and R-4 occupancies may qualify for expedited Fire Department permit issuance. Contact the Los Angeles County Fire Department or visit* ***fire.lacounty.gov*** *for more information.*

THE PERMIT APPLICATION AND PLANS SHOULD INCLUDE THE FOLLOWING
Energy Storage Systems (ESS) 1207.1.5 & 1207.4 CFC

- Location and layout diagram of the room or area in which the ESS is to be installed.
- Details on the hourly fire resistance ratings of assemblies enclosing the ESS.
- Quantities and types of ESS.

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- Manufacturer's specifications, ratings, and listings of each ESS. ESS must be UL 9540 listed.
- Description of energy (battery) management systems and their operation.
- Identify if the system is to be used as a partial or a whole structure backup.
- Location and content of required signage.
- Details on fire suppression, smoke or fire detection, thermal management, ventilation, exhaust and deflagration venting systems, if provided.
- Support arrangement associated with the installation, including any required seismic restraint.
- A commissioning plan complying with *1207.2.1.*
- A decommission plan complying with *1207.2.3.*
- Show required working clearances for all existing/new electrical equipment.
- Show method and location of required ventilation for equipment.
- Show method of protection against physical damage (e.g., bollards for vehicular impact) for the ESS, per the manufacturer's instructions.
- Provide a single line diagram:
    - Show grounding and bonding for the ESS and SPV (if installed), including the ground return path.
    - Show method of interconnection.
    - Show overcurrent protection method and rating when required.
    - Include detailed wiring information for all new circuits, including:
        - Conductor size and type.
        - Conduit size and type.
        - Show all disconnecting means.
        - Show ratings (voltage, ampacity, environmental, etc.) for new and existing service equipment.
- Denote whether the ESS is AC-coupled or DC-coupled.
- If system is DC-coupled, show that the rapid shutdown functionality for controlled conductors of PV system remains unaffected by DC-coupled energy storage battery circuit(s).
- Location and content of signage. In addition to the mandatory signage, show on the plans a warning sign with the following:
        - 8" x 10" plaque on or adjacent to the main disconnect to state the number of energy sources (e.g., utility power, PV panels and energy storage system) along with shut-off instructions.
        - The plaques shall be UV and water resistant with white lettering on red backing mechanically fastened.
- Structural requirements:
        - Identify if the ESS will be wall or floor-mounted.
        - Provide manufacturer's anchorage detail. A battery(s) installed at the same location, weighing > 400 pounds requires structural calculations and mounting details stamped and signed by a CA licensed professional Engineer.

INSPECTION PROCEDURES:

Provide amperage inspection prior to calling for Building Department inspection. • Amp inspection is to verify that the ESS in not back feeding the grid.

City inspector responsibilities:

- LA County Fire Department inspection.
- Planning Inspection may be required
- Placement per plan
- Disconnects per plan
- Conductor numbers, gauge, and type per plan
- Conduit size and type per plan
- Equipment per plan
- Grounding and bonding
- Labeling per plan. All else to be certified in writing by the installer
- Working Clearance