CALIFORNIA
BUSINESS AND ECONOMIC DEVELOPMENT

GO-Biz Clean Energy Permitting Initiative

Supporting Land Use Permitting Processes: A Guide to Developing Clean Energy Ordinances

September 17, 2025
12:00 – 1:30 PM

Webinar Q&A

Ask questions anonymously via https://tinyurl.com/GO-Biz-Question or via this QR Code:

AGENDA

12:00 – 12:20	• Overview of the Clean Energy Permitting Initiative
12:20 – 1:00	• Supporting Land Use Permitting Processes: A Guide to Developing Clean Energy Ordinances
1:00 – 1:20	• Questions and Discussion
1:20 – 1:30	• How to Stay Connected

Overview of the Clean Energy Permitting Initiative

Drivers for Improved Efficiencies in Permitting Processes

California's Energy and Climate Goals

- California has set the nation's first state-wide target of reaching carbon neutrality and to decarbonize the state's electrical grid by 2045.

Expected Growth of New Energy Resources

- 2025 | ~3500 MWs
- 2026 –2028 | 17,000MWs

Tracking Energy Development (TED) Task Force

- Consists of GO-Biz, CEC, CPUC and CAISO
- Provides assistance for clean energy project development needed to meet state's reliability needs
- Information collected shows that long permitting timelines is one of the main issues delaying project deployment

Clean Energy Permitting Initiative

PURPOSE

- Provide best practices and set of tools and resources for local planning authorities (LPAs) to accelerate clean energy project development across California

OUTCOME

- GO-Biz Clean Energy Permitting Playbook and Toolkit
  - Report of findings
  - Resource Toolkit for LPAs

SCOPE

Onshore Wind

Large-scale Solar

Battery Energy Storage Systems

GO-Biz Clean Energy Project Permitting Initiative

Process & Timeline

Phase	*Jan - Apr 2025*	*Apr - Sept 2025*	*Oct - Nov 2025*
	Complete	In Progress	In Progress
	Discovery & Data Collection	**Playbook and Toolkit Development**	**Playbook and Toolkit Publication**
Outcomes	**Stakeholder Engagement:** Conduct surveys and interviews with local planning authorities, developers, and community-based organizations. **Permitting Process Evaluation:** Evaluate the permitting processes of local jurisdictions for large-scale renewable energy projects. **Information Synthesis:** Compile and analyze the gathered data to derive actionable insights.	**Playbook Development:** Developed based on findings from outreach. Seek feedback through focus groups. Develop actionable recommendations. **Playbook and Toolkit Development:** • Best Practices: Methods to streamline and optimize permitting workflows. • Guidance and Support Resources: Tools, templates, and guidance materials to assist local planning authorities throughout the permitting process.	**Playbook Launch** • Draft Release: Targeted for summer 2025 to allow early engagement and review. • Final Version: Scheduled for release in late fall 2025, incorporating stakeholder input. **Stakeholder Engagement** Solicit feedback on both the draft report and toolkit to ensure relevance, clarity, and usability.

Discovery & Data Collection

Surveys, Interviews, Webinars, Focus Groups & Conferences

Complete

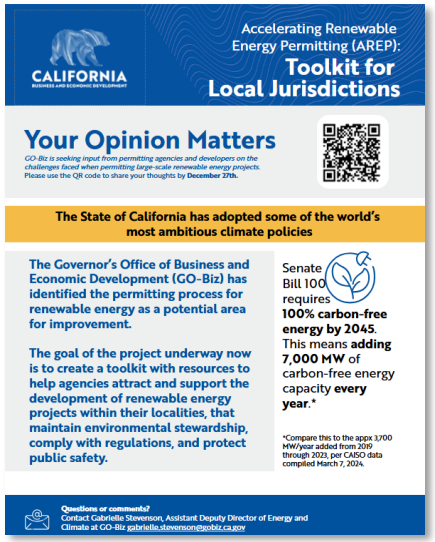
SURVEYS

- ~200 responses across 4 surveys for:
  - Local Planning Authorities (LPAs)*
  - Developers
  - Community-based organizations and other stakeholders
  - Native American Tribes

Survey Response Rate for LPAs: 18.7%

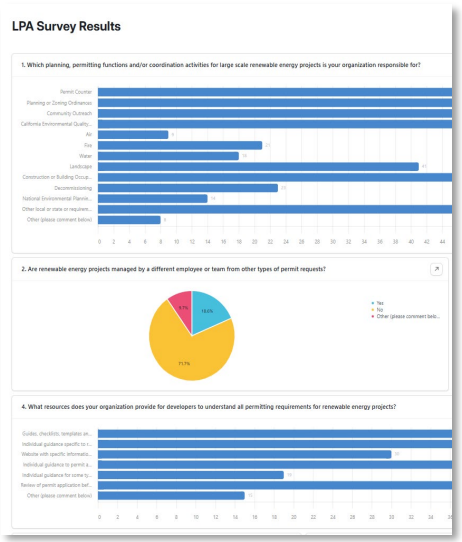
INTERVIEWS

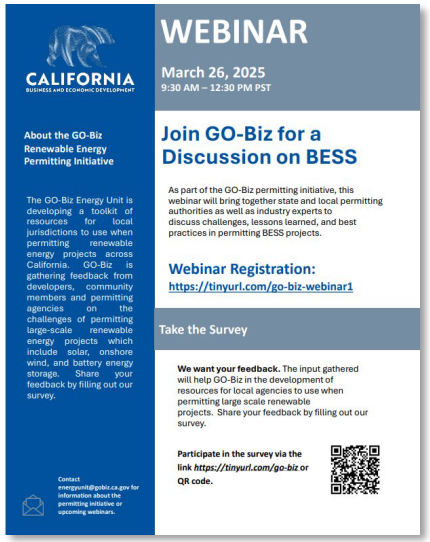
- Conducted 80+ interviews for in-depth insights with:
  - Local Planning Authorities
  - Developers
  - Trade Associations
  - Native American Tribes
  - Community-based Organizations



WEBINARS, FOCUS GROUPS & CONFERENCES

- GO-Biz BESS Webinar
- REACH IE Conference
- Focus groups: Solar Model Ordinance, BESS Model Ordinance, Community Benefits Guide





Outreach indicated that model ordinances would help facilitate clean energy development in CA

Local Permitting Authorities

Developers

Other Organizations

Health and safety, including fire risk were ranked a **top barrier** to accelerating renewable energy deployment[1, 2]

Access to technical experts and **model ordinances** were among top resources selected by LPAs to support permitting[3]

Inconsistent and changing permitting requirements can pose challenges to clean energy development

Many counties already have ordinances specific to solar and onshore wind, but **most counties do not yet have a BESS-specific ordinance**

[1] *LPA Survey Q15. Using a scale of 1 (no barriers) to 5 (significant barriers), which of the following are barriers to accelerating renewable energy project permitting*
[2] *Developer Survey Q15. Using a scale of 1 (no barriers) to 5 (significant barriers), which of the following are barriers to accelerating renewable energy project permitting?*
[3] *LPA Survey Q21. Would your organization benefit from any of the following resources to support permit processing?*

Resources in Development for LPAs

Complete

- Alignment of community interests and statewide goals
  - Early & collaborative engagement between parties (developer, planner, community)

- Model ordinances for large scale clean energy projects
  - BESS, solar, and onshore wind

- Application resources and checklists
- Factsheets
- Clean energy development and permitting processes

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Scope of this webinar

- Application resources and checklists
- Factsheets
- Clean energy development and permitting processes

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Scope of this webinar

Focus of webinar

- Application resources and checklists
- Factsheets
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Supporting Land Use Permitting Processes: A Guide to Developing Clean Energy Ordinances

Introduction & Purpose

What is a Land Use Ordinance?

DEFINITION

- A land use ordinance is adopted by a city, town, or county to govern how land can be used and developed
- Land use ordinances are used to ensure that uses of land are compatible with local plans for growth and development and protect public health and safety

CLEAN ENERGY ORDINANCES

- Ordinances can be adopted to specifically govern the land use of clean energy projects
- Many localities in California already have ordinances specific to solar and onshore wind land use, but most do not yet have an ordinance specific to BESS

Introduction and Purpose of Guide

PURPOSE

- Feedback from stakeholder interviews highlighted a need for **technical information and guidance** on permitting clean energy projects, particularly BESS

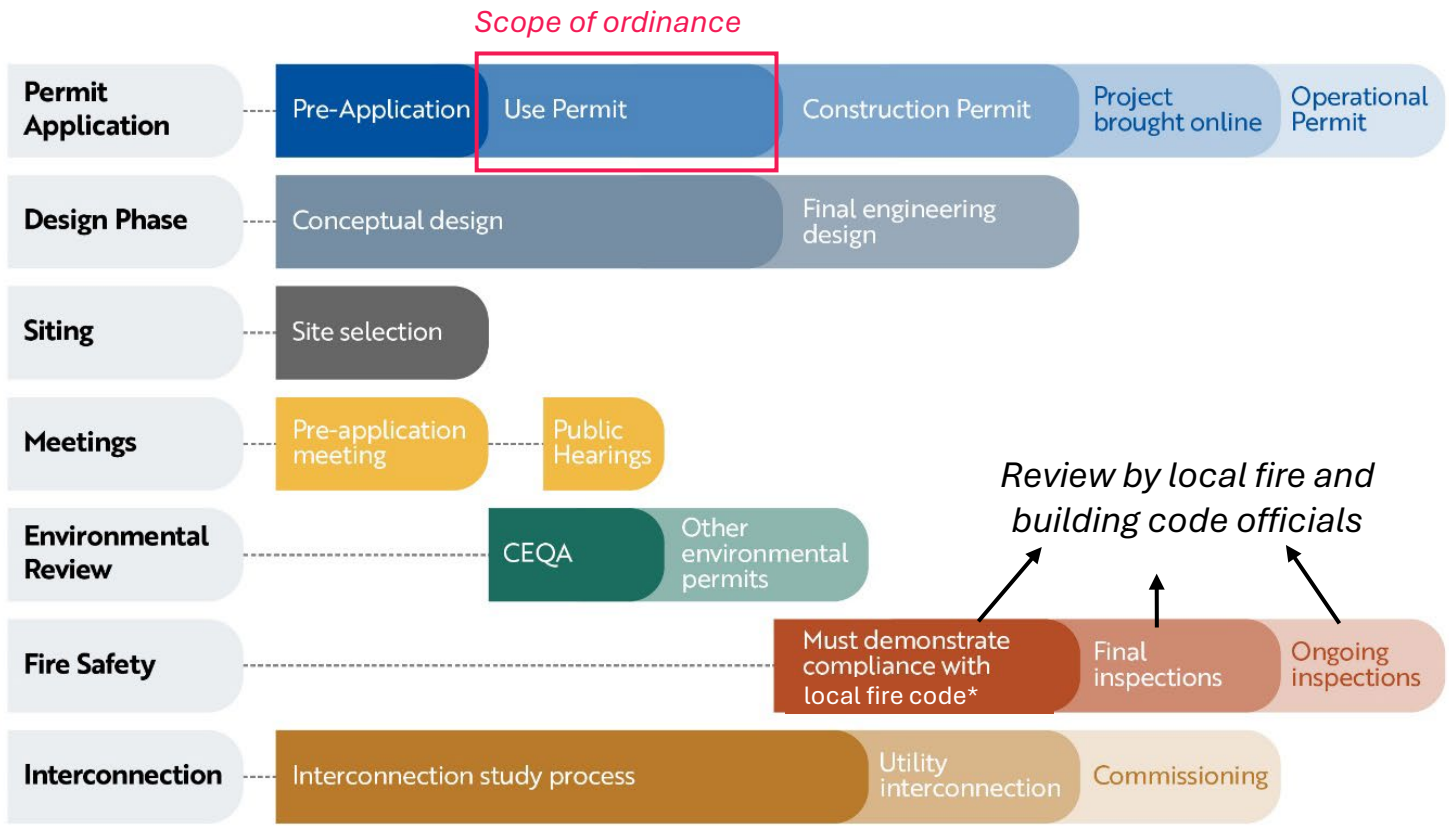
"Supporting Land Use Permitting Processes: A Guide to Developing Clean Energy Ordinances" will be part of the GO-Biz Clean Energy Permitting Toolkit to serve as a resource for Local Planning Authorities (LPAs).

- There is a **separate guide for each technology type** (solar, onshore wind, BESS)
- Each local jurisdiction will have different needs. This guide aims to provide **options and considerations**, rather than specific recommendations
- The intended audience of the guide is **local land use planners** and the guide is focused on the **local land use permitting process** for solar, onshore wind, and BESS
- The purpose of the guide is to provide LPAs with technical information and how that information can be considered to promote safety while facilitating responsible development
- LPAs are **not** required to adopt any components of the model ordinance

Overview of BESS Permitting Process

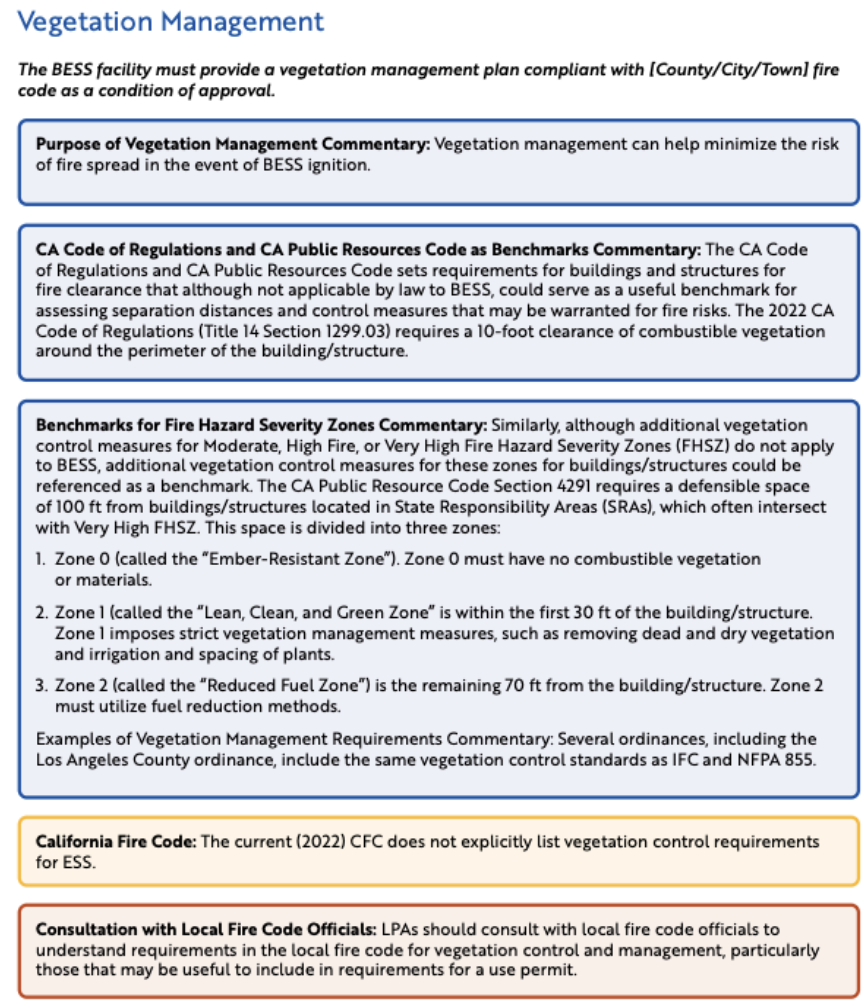
- Many fire-safety related requirements for BESS are included in construction permit requirements
  - Therefore, many of these requirements are not needed in a use permit
- Furthermore, project design must be finalized to demonstrate compliance with fire safety-related requirements
  - Project design is often not finalized at the time of a use permit application

Core BESS Permitting Process



*Local fire code is referenced since local fire code must, at minimum, comply with California Fire Code (CFC), but may be more stringent than CFC

Overview of Clean Energy Ordinance Guides



Vegetation Management

The BESS facility must provide a vegetation management plan compliant with [County/City/Town] fire code as a condition of approval.

Purpose of Vegetation Management Commentary: Vegetation management can help minimize the risk of fire spread in the event of BESS ignition.

CA Code of Regulations and CA Public Resources Code as Benchmarks Commentary: The CA Code of Regulations and CA Public Resources Code sets requirements for buildings and structures for fire clearance that although not applicable by law to BESS, could serve as a useful benchmark for assessing separation distances and control measures that may be warranted for fire risks. The 2022 CA Code of Regulations (Title 14 Section 1299.03) requires a 10-foot clearance of combustible vegetation around the perimeter of the building/structure.

Benchmarks for Fire Hazard Severity Zones Commentary: Similarly, although additional vegetation control measures for Moderate, High Fire, or Very High Fire Hazard Severity Zones (FHSZ) do not apply to BESS, additional vegetation control measures for these zones for buildings/structures could be referenced as a benchmark. The CA Public Resource Code Section 4291 requires a defensible space of 100 ft from buildings/structures located in State Responsibility Areas (SRAs), which often intersect with Very High FHSZ. This space is divided into three zones:

1. Zone 0 (called the "Ember-Resistant Zone"). Zone 0 must have no combustible vegetation or materials.
2. Zone 1 (called the "Lean, Clean, and Green Zone" is within the first 30 ft of the building/structure. Zone 1 imposes strict vegetation management measures, such as removing dead and dry vegetation and irrigation and spacing of plants.
3. Zone 2 (called the "Reduced Fuel Zone") is the remaining 70 ft from the building/structure. Zone 2 must utilize fuel reduction methods.

Examples of Vegetation Management Requirements Commentary: Several ordinances, including the Los Angeles County ordinance, include the same vegetation control standards as IFC and NFPA 855.

California Fire Code: The current (2022) CFC does not explicitly list vegetation control requirements for ESS.

Consultation with Local Fire Code Officials: LPAs should consult with local fire code officials to understand requirements in the local fire code for vegetation control and management, particularly those that may be useful to include in requirements for a use permit.

Template ordinance language: language that can serve as a starting point for LPAs to adapt into their own local ordinance

- *LPAs should solicit legal and regulatory advice from their own teams before adopting any template language*
- Refers to local fire code requirements

Commentary: additional background on each topic within the Guide, such as details on the use cases for different potential options

California Fire Code requirements: although template ordinance language refers to the local fire code, California Fire Code requirements are also included to provide context on the minimum requirements common to all local fire codes across the state

Consultation with Local Fire Code Officials: any recommended consultation with local fire code officials is here

Supporting Land Use Permitting Processes: A Guide to Developing Clean Energy Ordinances

Content Overview

Key Topics Covered in Guide

Topic Area	Key Questions Answered
Applicability	In what situations should this ordinance be applied?
Permit Types	What is the appropriate permit type for each different zoning district?
Application Requirements	What documentation should developers submit to local planning authorities to produce a "complete" application?
Design Standards (BESS Setbacks)	What is an appropriate setback for BESS to ensure the safety of nearby populations and structures?
Design Standards (Solar and Wind)	What are the appropriate setbacks and height limits to ensure that projects can operate safely and minimize disturbance?
Fire Safety	What are the appropriate fire safety requirements for a BESS?
Permitting, Safety, and Environmental Compliance	What additional standards are appropriate to mitigate safety risks and environmental impacts?
Decommissioning	How should developers assure that there will be funding available to restore sites to their previous condition once projects are dismantled at the end of their useful life?
Additional Considerations	What additional considerations might LPA make when developing ordinances tailored to their specific needs and preferences?

Applicability

In what situations should this ordinance be applied?

- This guide focuses on land use permits for **large-scale** solar, wind, and BESS facilities
  - This guide does not apply to behind-the-meter (BTM) systems
- Projects may be modified or augmented without re-applying for land use permits if any changes are consistent with the plans outlined in the original permit
- Planners must provide advanced notice of any anticipated code changes

Technology	Size Threshold	Rationale
BESS	≥1 MWh	Approximate cutoff for "utility-scale" infrastructure, including large industrial single-customer facilities
Solar	≥20 MWac	Aligns with CAISO Large Generator Interconnection Procedures
Wind	≥20 MW	Aligns with CAISO Large Generator Interconnection Procedures

Permit Types

What is the appropriate permit type for each different zoning district?

- **Discretionary permits** require discretionary approval from a Board of Supervisors and use California Environmental Quality Act (CEQA) to guide the environmental review process
  - **Purpose:** Allow site-specific review for projects in sensitive areas
- **Ministerial permits** allow by-right use permit approvals for projects that meet all pre-defined application requirements, including environmental requirements
  - **Purpose:** Allow streamlined permitting in pre-designated zones

BESS, Solar, and Wind Permit Types

Land Use Classification	Discretionary	Ministerial
Residential	✅	
Small Commercial (Neighborhood / General)	✅	
Large Commercial (Regional / Planned)		✅*
Mixed-Use	✅	
Industrial		✅*
Degraded or Nonproductive Agricultural (defined by LPAs)		✅
Other Agricultural	✅	
Open Space / Public Lands / Recreation	✅	

**Discretionary permits for wind are suggested for large commercial (regional / planned) and industrial permits*

Application Requirements

What documentation should developers submit to LPAs to produce a "complete" application?

- Ministerial and discretionary permits have different review processes, so ministerial permits may require certain documentation earlier in the project development cycle
- Ordinance language can contain use permit **conditions of approval** – these are additional requirements that must be submitted once project design has been finalized as a condition of a use permit
  - Hazard Mitigation Analysis, Large-Scale Fire Test, and Vegetation Management Plan
- BESS, solar, and wind projects each have somewhat different environmental review needs
  - For example, wind projects should undergo surveys to understand their impacts on bird and bat populations

Additional best practices:

- Notification of withdrawal of interconnection request
- Pre-application meetings

Design Standards

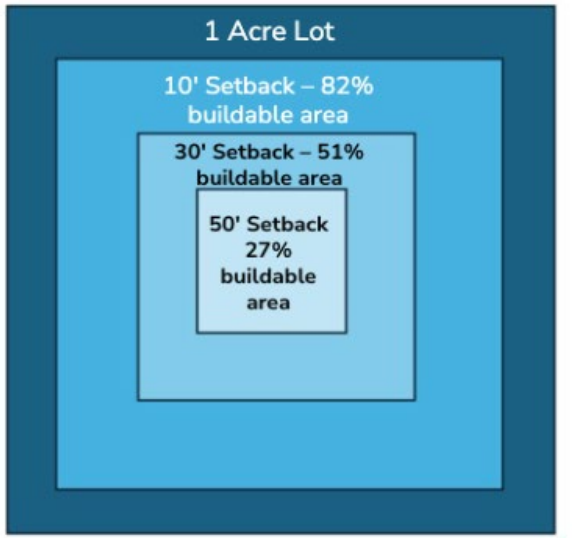
BESS Setbacks

What is an appropriate setback for BESS to ensure the safety of nearby populations and structures?

- Rather than recommending specific setback distances, the BESS model ordinance presents 3 options for setbacks
  - Provides commentary on circumstances under which different setbacks may be appropriate
- Engineered analysis, conducted for a construction permit, may further refine setback requirements for construction permit issuance

Illustrative Buildable Areas by Setback Requirement

Setback Requirement (ft)	1 Acre Lot	5 Acre Lot	20 Acre Lot
	Buildable Area (% of Lot)		
10'	82%	92%	96%
30'	51%	76%	88%
50'	27%	62%	80%
100'	0.2%	33%	62%
300'	0%	8%	13%



Lithium-ion BESS Technology Setback Options

Option	BESS Setback	Potential Use Cases
Minimum compliance with local fire code	10 ft (CFC) Setback in local fire code may vary by jurisdiction	Certain land use zones or building/property types (e.g. industrial zones, unoccupied buildings)
Minimum requirements for fire apparatus access roads	Typically 30 ft (requires consultation with local fire officials)	If first responders have emergency response access needs that exceed other applicable setback requirements
>50 ft	>50 ft	Certain building/property types (e.g. has occupants that cannot easily relocate, such as residential buildings and hospitals) *Note: a scientific basis for >50 ft setbacks across all sites has not been established*

Design Standards

Solar and Wind Setbacks and Height Limits

What are the appropriate setbacks and height limits to ensure that projects can operate safely and minimize disturbance?

Setbacks

- Solar and wind setbacks are broken out by property line/building/zone type and are designed to reduce visual, noise, and other aesthetic impacts
  - Wind setbacks are also designed to provide buffer relative to the turbine's maximum tip height
  - LPAs should consult with local fire and building code officials to understand any additional requirements

Maximum Heights

- Solar: 25’ for most use cases (potentially 15’ for some community solar projects or urban uses)
- Wind: not to exceed the manufacturer’s recommendation

Source: The Los Angeles Times

Fire Safety

What are the appropriate fire safety requirements for a BESS?

- Projects must demonstrate compliance with local fire and building code for issuance of a construction and operational permit
- Therefore, many fire safety-related requirements are **not necessary in a use permit** to ensure safe operations
- Recommendations were informed by stakeholder feedback

Recommendations for Fire Safety Requirements in BESS Use Permit

Fire Safety Requirement	Land Use Permit	Construction Permit
Site Accessibility		✅
Equipment Certification		✅
Large-Scale Fire Testing (LSFT)	✅ (Condition of Approval)	✅
Explosion Prevention and Control		✅
Hazard Mitigation Analysis (HMA)	✅ (Condition of Approval)	✅
Dispersion Analysis (”Plume Modeling”)		✅
Emergency Response Plan (ERP)	✅ (Preliminary ERP)	✅ (Final ERP)
Safety Systems		✅
Training		✅

Purview of this ordinance

Permitting, Safety, and Environmental Compliance

What additional standards are appropriate to mitigate safety risks and environmental impacts?

Environmental Compliance

- All projects are subject to environmental review
  - **Discretionary permits** must go through California Environmental Quality Act (CEQA) process
    - A full Environmental Impact Report (EIR) may be needed depending on findings
  - **Ministerial permits** must go through any environmental requirements listed in pre-defined application requirements
- Projects that impact any **state or federally-listed protected species** must comply with the California and/or federal Endangered Species Act
- All projects should provide a s**tormwater assessment** as a condition of approval

Additional Compliances

- **Operation and Maintenance** is covered in construction permit
- **Vegetation management, physical security,** and **signage** must comply with local fire code

Decommissioning

How should developers assure that there will be funding available to restore sites to their previous condition once projects are dismantled at the end of their useful life?

Decommissioning plans ensure land will be restored to its pre-project state after the useful lifetime of the project

- Construction permits include decommissioning requirements, but additional requirements may be warranted for a use permit, such as:
  - Estimate of when decommissioning will occur
  - Timeline to decommission and remove the facility
  - Detailed description of decommissioning activities
  - Financial assurances for system removal costs
  - A site restoration plan (including mitigation of any environmental impacts)

Additional Considerations

What additional considerations might LPA make when developing ordinances tailored to their specific needs and preferences?

- Although not strictly necessary, LPAs may opt to include requirements on the following in their ordinances:
  - Visual impacts
  - Lighting
  - Sound
  - Requirements given unique local factors
- The following additional considerations are likely not needed in a use permit ordinance:
  - On-site water requirements
  - Review timeline
  - Cyber security

Webinar Q&A

Ask questions anonymously via https://tinyurl.com/GO-Biz-Question or via this QR Code:

How to Stay Connected

Feedback on this Webinar & Provided Tools

Downloadable Draft Guides:

- https://business.ca.gov/wp-content/uploads/Draft_BESS_Model_Ordinance_Guide.pdf
- https://business.ca.gov/wp-content/uploads/Draft_Wind_Model_Ordinance_Guide.pdf
- https://business.ca.gov/wp-content/uploads/Draft_Solar_Model_Ordinance_Guide.pdf
- Send comments to energyunit@gobiz.ca.gov by October 10th, 2025.

Upcoming Webinars

Overview of the Clean Energy Permitting Playbook and Toolkit – A Walkthrough
10/22

Email

Contact for any questions*:*
energyunit@gobiz.ca.gov

Thank you