



City Council Meeting
Public Comments
May 7, 2025



May 5, 2025

401 WEST A STREET
SUITE 200
SAN DIEGO, CA 92101
858-568-7777

cleantechsandiego.org

The Honorable Dane White
Mayor, City of Escondido
201 North Broadway
Escondido, CA 92025

RE: City of Escondido Council Meeting Agenda Item 10: Battery Energy Storage Systems Within the City of Escondido

MISSION:

To accelerate clean technology innovation and promote the equitable deployment of sustainable solutions across the San Diego region for the benefit of the economy, the environment, and all members of the community.

Dear Mayor White and Councilmembers:

On behalf of Cleantech San Diego, please accept this letter regarding Agenda Item 10: Battery Energy Storage Systems within the City of Escondido, May 7, 2025, City of Escondido Council Meeting.

As background, Cleantech San Diego is a member-based business organization founded 17 years ago to position the San Diego region as a leader in the cleantech economy. We represent the renewable energy industry, a critical sector that employs close to 40,000 people in our region and has a \$9.4 billion impact on our regional economy.

Battery energy storage systems (BESS) are critical to San Diego’s clean energy transition. They keep our energy grid stable and reliable – which is critical for our region and our economy. BESS prevent blackouts during heat waves and reduce grid stress when electricity demand peaks. They store solar power during the day, when it is plentiful, and share it at dusk when electricity demand rises. By capturing excess solar, BESS improve the ROI on renewable energy by reducing its waste. Simply stated, they are critical infrastructure.

As the battery storage industry has evolved and technology has advanced, so have the types of BESS projects and ways in which they are designed and constructed. Codes and standards regulating BESS have also rapidly evolved to better address safety concerns. Today, BESS are built with the latest in technology and safety with highly-advanced emergency monitoring and protocols in place to ensure they pose little risk to surrounding areas. BESS must comply with national fire safety standard NFPA 855, which has provided a big boost to battery storage safety. NFPA 855 also requires all BESS to undergo UL 9450 certification and submit detailed safety documentation, plans, and testing results to local authorities prior to installation. BESS that meet today’s safety standards and certifications are unlikely to have fire incidents, and as the deployment of BESS has increased, the number of incidents has fallen.

A recent public opinion survey of more than 800 San Diego County residents conducted at the request of Cleantech San Diego found that 65 percent support California’s transition to clean energy, 66 percent support BESS in San Diego County, and 57 percent would support BESS in their neighborhoods. Clearly, residents in San Diego County want a clean energy future and understand that BESS is a part of that.

As you consider Agenda Item 10, Cleantech San Diego respectfully requests you update the City’s fire code to be consistent with that of the County (City Council Options for Staff Direction, Option 3) and reconsider the Urgency Ordinance regarding BESS within the City of Escondido (City Council Options for Staff Direction, Option B).

Thank you in advance for your consideration and for your recognition of the positive economic, workforce, and sustainability benefits BESS projects bring to our region.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Anderson", written over a light gray rectangular background. A vertical line is positioned to the right of the signature.

Jason Anderson
President and CEO
Cleantech San Diego



Brittany Syz
Vice President
External Affairs & Communications

8320 Century Park Court
San Diego, CA 92123

tel: (858) 654-1513
email: bsyz@sdge.com

5/7/2025

Escondido City Council
Mayor Dane White
Escondido City Hall
201 North Broadway
Escondido, CA 92025

Subject: Item #10: Battery Energy Storage Systems Within the City of Escondido

Hon. Dane White, Mayor, City of Escondido:

Battery Energy Storage Systems (BESS) play a critical role in ensuring the reliability and stability of California's power grid as the state integrates more renewable energy sources. As energy storage technologies continue to evolve and advance, the safety of these systems is—and should remain—a central focus of the development of BESS projects.

SDG&E is committed to maintaining the safety of these systems and conducts thorough site and technology assessments adhering to industry codes and standards. Continuous advancements in technology, rigorous testing, and close coordination with public safety agencies ensure that BESS are safe and reliable.

SDG&E has developed a portfolio of over 20 utility-owned BESS projects, totaling over 385 Megawatts (MW) and 1,550 Megawatt hours (MWh) across the region. These BESS projects support the safe and reliable operation of the bulk electric system.

Reaching the State's ambitious zero emissions goal by 2045 will require BESS as a critical component of any action plan. SDG&E believes BESS provides an effective strategy to achieving those goals and we are concerned that any moratorium on BESS facilities will create a "chilling effect" on the industry. Broad moratoriums on BESS project will negatively impact our ability to meet renewable energy and resiliency goals while also negatively impacting the economy.

On behalf of our 4,700 employees who are committed to building a clean, safe, and reliable infrastructure, we encourage the City Council to work with SDG&E and San Diego County to ensure consistent fire safety standards, which will allow for the continued safe development of BESS projects in the region. We also respectfully request you oppose extending the moratorium on BESS projects in the City of Escondido.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Brittany Syz', written in a cursive style.

Brittany Syz
Vice President, External Affairs & Communications

CC:

Honorable Deputy Mayor Consuelo Martinez
Honorable Councilmember Christian Garcia
Honorable Councilmember Joe Garcia
Honorable Councilmember Judy Fitzgerald
Economic Development Director Jennifer Schoeneck
City Manager Sean McGlynn
City Attorney Michael R. McGuinness
City Clerk Zack Beck
Veronica Morones, City Planner



IBEW 569

May 5, 2025

Hon. Mayor Dane White
Hon. Members of the Escondido City Council
City of Escondido
201 North Broadway
Escondido, CA 92025

RE: Battery Energy Storage Systems within the City of Escondido - City Council Meeting 5/7/25

Dear Mayor White and Councilmembers,

On behalf of IBEW 569, representing 3,700 union electricians and power professionals, with over 250 members and their families living in Escondido, we commend the City Council for attending to the safety and welfare of residents' lives and property related to Battery Energy Storage System (BESS) facilities within its borders. Today we are writing to respectfully urge the City Council to take the following actions:

1. Rescind the Urgency Ordinance enacting a moratorium on commercial Battery Energy Storage System (BESS) projects (Option B, Staff Report "Battery Energy Storage Systems within the City of Escondido," Escondido City Council Meeting 5/7/25);
2. Direct staff to incorporate the County's Guidelines as part of the upcoming California Fire Code (CFC) required update (staff's recommendation - Option 3, Staff Report "Battery Energy Storage Systems within the City of Escondido," Escondido City Council Meeting 5/7/25); and
3. Direct staff to incorporate **minimum workforce safety standards for all stages of the BESS lifecycle** – including installation, assembly, testing, commissioning, maintenance, repair, retrofitting, and decommissioning – in the CFC update as described below.

Incorporating minimum workforce safety standards for *all* stages of the BESS lifecycle is critical to ensuring the safe, reliable, and sustainable deployment of BESS projects, especially given the complex technical and safety challenges they present. In addition, amending the Escondido Fire Code through the

upcoming CFC required update is the most expeditious pathway to ensure a skilled and trained workforce is doing the critical work that is essential in preventing the root causes of BESS failures. This is why we support staff's recommendation (Option 3) to incorporate the County's Guidelines in the CFC required update to the City's Fire Code. However, we note a critical gap in the County Guidelines that remains unaddressed.

In 2024, the County of San Diego Fire Protection District researched and developed the *Battery Energy Storage Systems (BESS) Best Practices Report* in response to community concerns over a series of BESS incidents. The report provides valuable guidance on safety, permitting, and compliance for BESS installations. However, IBEW 569 noted a lack of specificity to the County Guidelines around workforce safety standards and so urged the Fire Protection District to revise the guidelines to include explicit policy recommendations establishing **minimum workforce safety standards for all stages of the BESS lifecycle**, including installation, assembly, testing, commissioning, maintenance, repair, retrofitting, and decommissioning. Minimum workforce safety standards are critical to ensuring the safe, reliable, and sustainable deployment of BESS projects, especially given the complex technical and safety challenges they present.

To address this need, we urge the City Council to direct staff to incorporate into the CFC update of the following workforce safety standards for all BESS projects with an energy capacity exceeding 70 kilowatt-hours (kWh):¹

1. **Certified Electricians for All Electrical Work:** Require that all electrical work be performed by certified electricians (e.g., general electrician, trainee electrician, and registered apprentice electrician).
2. **Energy Storage and Microgrid Training and Certification (ESAMTAC):** Require that a minimum of 15% of the onsite certified electricians performing electrical work hold an ESAMTAC certification.

In regional work toward BESS Best Practices, the County and other municipalities are including important recent updates from state and national fire codes, including California Fire Code §1207 and National Fire Protection Association §855, and requiring appropriate listing and laboratory testing on certain component parts (e.g. OSHA, NRTL, and UL listings). In addition, other best practices are being required, such as emergency preparedness plans and maintenance plans for BESS. However, regional work continues to miss a critical element to ensuring the safety of our neighborhoods.² Indeed, what does it matter if you have UL listed component parts if they are assembled poorly?

¹ See attached "2025_BESS Workforce Safety Standards - Policy Recommendations."

² City of San Marcos/San Marcos Fire Department, "Protection Guidelines for Lithium-Ion BESS Facilities," (2025), <https://sanmarcos.legistar.com/View.ashx?M=F&ID=13916318&GUID=428F036C-A18B-4C04-B9AA-8D09793C3894>.

The Electric Power Research Institute (EPRI) houses the most comprehensive stationary BESS failure database currently available. In an analysis of the root causes of failures within its database, EPRI concluded in a May 2024 Whitepaper that the “most common root cause of [BESS] failure” arises from the “**Integration, Assembly, and Construction**” of constituent components.³ Failures attributed to “Integration, Assembly, and Construction” are failures “due to poor integration, component incompatibility, incorrect installation of elements of an energy storage system or due to inadequate commissioning procedures.”⁴ Put differently, the most common cause of BESS failures globally are a result of the work performed on these facilities. Shouldn’t we demand that the most highly skilled and trained workforce be performing all work on BESS? To that end, IBEW 569 urges the codification of minimum workforce safety standards that prevent fires arising from the most common root cause of BESS failures.

San Diego County’s *BESS Best Practices Report* report – that includes the County Guidelines the City of Escondido is considering adopting – incorporated the EPRI Whitepaper, though it was buried as a reference in the report’s appendices.⁵ We have attached the full EPRI Whitepaper for your review. The County *BESS Best Practices Report* generally focuses on detailing current codes and regulations and recommends Guidelines that ensure component parts used on BESS are lab tested. Chief among these designations is the “Underwriter’s Listed” or UL designation. A UL designation means that the listed part has been product tested and certified by the UL lab. This designation is given after testing in a highly controlled laboratory setting. These components then make their way to BESS facilities for installation and/or maintenance.

Simply ensuring parts are UL certified components – as the County Guidelines recommend – does not solve for the root cause of BESS failures. Often, component parts come from multiple suppliers. They are not necessarily designed to work together.⁶ The “**integration, assembly, construction**” using these disparate parts is thus critical to the installation process to ensure compatibility and proper functionality. For example, poor integration of the components that constitute the Balance of System (BOS) is one of the primary root causes of all recorded BESS failures.⁷

Of what is the BOS composed? Items such as electrical wiring, transformers, fire suppression systems, HVAC, liquid cooling systems, busbars, cabling, and enclosures. In short, components that certified electricians are the skilled and qualified workforce trained to properly and safely install and maintain.

³ Electric Power Research Institute (EPRI), “Insights from EPRI’s Battery Energy Storage Systems (BESS) Failure Incident Database: Analysis of Failure Root Cause,” EPRI.com, May 2024, p.8, accessed November 18, 2024. <https://www.epri.com/research/products/000000003002030360>

⁴ EPRI Whitepaper, p. 4

⁵ Insights from EPRI’s 2024 Whitepaper are found in Appendix D of Jensen Hughes’ “San Diego County BESS Best Practices: Policy Recommendations for Battery Energy Storage Systems Projects,” November 8, 2024, p. D-1.

⁶ EPRI Whitepaper, p. 10

⁷ EPRI Whitepaper, p. 10

For these reasons and more, IBEW 569 continues to urge the City of Escondido, the County of San Diego, and other municipalities, public agencies, and fire districts to update their fire codes and other permitting and procurement policies to not only follow the best practices of the Kern County Fire Department,⁸ but also require that all electrical work on BESS facilities with an energy capacity exceeding 70 kilowatt-hours be performed by **certified electricians** (e.g., general electrician, trainee electrician, and registered apprentice electrician) employed by **C-10 licensed contractors**.

IBEW 569 appreciates the City's efforts to develop safety standards for BESS installations in Escondido. By incorporating the recommended minimum workforce standards, the City of Escondido will address a critical gap in the current County Guidelines and further its mission to promote public health, safety, and welfare.

Thank you for the opportunity to work with Escondido's capable and proficient city staff and to provide feedback on this important initiative.

Your Partner in Community Safety,



Jeremy Abrams
Business Manager
IBEW 569

cc:

Veronica Morones

⁸ The Kern County Fire Department's Fire Prevention Unit in 2022 updated its submittal requirements for a permit to install an Energy Storage System to require contractors of record with the following state contractors licenses do the following work as a condition of permitting: 1) Fire protection system submittals such as fire suppression and water supply shall include a C-16 - Fire Protection Contractor of record; 2) Fire alarm systems, fire detection, gas detection shall include a C-10 - Electrical Contractor of record. IBEW 569 strongly supports the Kern County Fire Department's initiative in requiring applicants to submit proof that contractors of record hold C-16 and C-10 licenses for the safety detection and suppression alert systems.



IBEW 569

Recommendations in Brief

County of San Diego

4/29/2025

1. Contractor's Licenses Recommendations:

C-10 licenses should be required for the installation, assembly, testing, commissioning, maintenance, repair, retrofitting, and decommissioning of a BESS facility or Energy Storage Management System; the installation, maintenance, and repair of fire alarm systems and gas detection systems; and C-16 licenses should be required for work performed on automatic sprinkler systems and water supplies.

2. Fire Code Draft Language:

Section _____ Purpose

The purpose of this _____ is to establish minimum installation and emergency response standards for battery energy storage system facilities. Ensuring the safe and effective installation, operation, and emergency response capabilities at these facilities is essential for protecting public safety, safeguarding property, and addressing the specific safety hazards associated with battery energy storage systems within the City of Escondido.

Section _____ Definitions

The following definitions shall apply to this _____:

“Battery energy storage system (BESS)” means a rechargeable energy storage system consisting of electro-chemical storage batteries, battery chargers, controls and

associated electrical equipment designed to store and release electrical power. The system is typically used to provide standby or emergency power, an uninterruptible power supply, load shedding, load sharing or similar capabilities.

“Battery energy storage system facility” means a battery energy storage system with an energy capacity exceeding 70 kilowatt-hours (kWh).

“Energy capacity” means the total amount of energy that a battery energy storage system can store, measured in kilowatt-hours.

“Energy storage management system (ESMS)” means an electronic system that protects energy storage systems from operating outside their safe operating parameters and disconnects electrical power to the energy storage system or places it in safe condition if potentially hazardous temperatures or other conditions are detected.

“Electrician trainee” means the same as defined in Title 8, Section 290.1 of the California Code of Regulations.

“ESAMTAC certification” means a certification provided by the Energy Storage and Microgrid Training and Certification program, indicating specialized knowledge and skills related to the installation and maintenance of energy storage systems.

“General electrician” means the same as defined in Title 8, Section 290.1 of the California Code of Regulations.

“Registered apprentice electrician” means a registered apprentice performing electrical work as part of an apprenticeship program approved under Chapter 4 of Division 3 (commencing with Section 3070) of the Labor Code, a federal Office of Apprenticeship program, or a state apprenticeship program authorized by the federal Office of Apprenticeship.

Workforce Standards

(a) Except as provided in subsection (b), a general electrician shall perform all electrical work involving the installation, assembly, testing, commissioning, maintenance, repair, retrofitting, and decommissioning of a BESS facility or ESMS.

(b) An electrician trainee or a registered electrician apprentice may perform electrical work involving the installation, assembly, testing, commissioning,

maintenance, repair, retrofitting, and decommissioning of a BESS facility or ESMS under the supervision of a general electrician.

(c) Starting in 202_, a minimum of fifteen (15) percent of the onsite certified electricians performing electrical work involving the installation, assembly, testing, commissioning, maintenance, repair, retrofitting, and decommissioning of a BESS facility or Energy Storage Management System (ESMS) shall hold an ESAMTAC certification. By 2030, the number of certified electricians holding an ESAMTAC certification shall increase to thirty-three (33) percent. By 2035, that number shall be fifty (50) percent.¹

¹ Regarding the ESAMTAC certification - IBEW 569's recommendation allows for a ramp-up time for the electrical industry to adjust to the new policy. We have discussed this with our industry partners at NECA San Diego.