

Meeting Date: 12/10/2024
Agenda Item number: 30
Batch No.: 05



Brittany Syz
Director
Regional Public Affairs

8326 Century Park Court
San Diego, CA, 92123

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

12/9/2024

San Diego County Board of Supervisors
Chair Nora Vargas
San Diego County Administration Center
1600 Pacific Highway
San Diego, CA, 92101

Hon. Nora Vargas, Chair, San Diego County Board of Supervisors:

Subject: Agenda Item 30: New Requirements for Battery Energy Storage System (BESS) Projects in Unincorporated Areas and CEQA Findings

OVERVIEW

San Diego County Fire Protection District (SDCFPD) has developed Interim Fire Protection Guidelines (Interim Guidelines) for addressing the fire and safety of Battery Energy Storage Systems (BESS) projects within the San Diego County Fire Protection District. These Interim Fire Protection Guidelines for BESS Facilities were provided to Interested Stakeholders for their review and comment ahead of the December 10, 2024, Board of Supervisors meeting. This letter represents San Diego Gas & Electric's ("SDG&E" or "Company") formal response to the invitation for comment.

SDG&E is committed to the safe operation of its current and future infrastructure, including its BESS facilities, and is supportive of the efforts of the SDCFPD and San Diego County. SDG&E's comments come from the perspective of having developed a portfolio of over 20 utility-owned BESS projects, several of which can carry customer load under microgrid operations. SDG&E's BESS facilities, totaling over 385 Megawatts (MW) and 1,550 Megawatt hours (MWh) across San Diego County and the region, currently support the safe and reliable operation of the bulk electric system and provide microgrid resiliency¹

¹ <https://www.sdge.com/major-projects/battery-energy-storage-systems-bess-and-microgrids>

SDG&E offers the following feedback and comments to help provide the SDCFPD and the Board of Supervisors items to consider as they evaluate the Interim Guidelines. In general we agree with many of these guidelines, however, as the owner-operator of several BESS facilities, SDG&E believes there is room for clarification of certain aspects of the proposed Interim Guidelines and consideration of as to whether certain aspects of the draft can benefit from further technical review. SDG&E's specific comments, in numerical order matching the Interim Guidelines and not in order of priority, are provided below.

COMMENTS

1. Explosion Prevention, Ventilation, and Gas Detection

General Comment: SDG&E concurs with the guidelines provided in NFPA 855 regarding explosion control for BESS systems. NFPA 855 recommends the use of either NFPA 68 (deflagration protection devices, or NFPA 69 (Explosion prevention through explosive level measurements and active ventilation of an enclosed space). This section of the Interim Guidelines, as written, suggests the only method of explosion prevention that will be accepted by SDCFPD will be those methods following NFPA 69. This requirement will needlessly and eliminate the use of products from established BESS manufacturers including a specific, well-known, domestic manufacturer with a high density of product deployment including utility scale systems, home energy storage and electric vehicles. Established BESS manufacturers have demonstrated explosion prevention can be achieved via other proprietary technologies, like instantaneous ignitors. More flexibility as to how to meet the intent of this guideline should be considered. Rejection of whole categories of explosion control solutions without a thoughtful consideration of the consequences is not advised.

2. Enclosures

Item 2.5: This item states Battery Management System (BMS) must be "approved and meet manufacturer's specifications". It is not clear who needs to approve the BMS as provided in this statement. From SDG&E's experience, BMS is typically provided by the battery module Original Equipment Manufacturer (OEM) and resides at the battery module level while an overarching Energy Management System (EMS) controls the bulk site by communicating with the OEM BMS. Is the intent of the Interim Guidelines that the SDCFPD will be reviewing or "approving" the technical designs of individual BMS?

3. Site Plans

General Comment: SDG&E agrees this a reasonable condition as SDG&E has performed this function beginning with the Company's first BESS in 2017 and

continues to work with local fire departments for each company-owned BESS project and is consistent with California Senate Bill (SB) 38 (Laird, 2023) which SDG&E adheres to.

4. Separation Distances and Site Requirements:

Item 4.2: This item would require at least 10 feet of separation between adjacent enclosures. This requirement substantially exceeds the guidelines provided in NFPA 855 which provides “Individual ESS units shall be separated from each other by a minimum of 3 ft (914 mm) unless smaller separation distances are documented to be adequate based on fire and explosion testing....” The Interim Guidelines, as written, does not provide for any deviation for systems which have demonstrated a design that limits enclosure-to-enclosure propagation, will result in larger project footprints and/or diminished project capacities. In short, the provision will likely arbitrarily eliminate potential BESS facilities. This requirement should consider the national standard, which was developed with the input of fire officials, and provide for more flexibility, such as considering enclosures that have demonstrated non-propagation between adjacent enclosures or through other project-specific mitigations.

More specifically, the Interim Guidelines requirement of a 100-foot setback and 10 feet of separation between adjacent enclosures are not consistent with NFPA 855. These requirements will likely prevent the development of BESS projects in San Diego County, and the proposed justification for these more restrictive guidelines is minimal and would have the effect of requiring all BESS facilities to be considered “remote” facilities. The Board should consider how the Interim Guidelines deviate from national standards and contemplate whether the justifications provided in the Interim Guidelines are sufficient for the deviation from national standards.

Item 4.3: This item would require what appears to be an arbitrary, minimum 100-foot setback from property lines with a potential increase in setback distance driven by plume modeling. First, it is not clear if the 100-foot setback requirement is applicable to all sides of a potential project, nor does it consider or seem to provide flexibility if a mitigation such as a barrier/wall is integrated into the site design. Further, it does not consider the design context, such as the types of receptor/s which may exist on adjacent properties. For example, what if there is open space, such as a concrete airfield on the other side of the property adjacent to the BESS? Additionally, while the interim guideline suggests that that distance could increase based upon the plume analysis, it doesn’t afford a potential decrease based on favorable model results.

SDG&E notes that both projects identified in the Interim Guidelines (Surprise, Arizona and Otay Mesa, California) were BESS projects which were deployed

inside of commercial buildings and did not utilize containerized solutions which seem most prevalent in current proposals.

In 2023 SDG&E commissioned four microgrid-capable, utility-scale BESS systems. These projects, in times of energy emergencies, are capable of isolating critical distribution circuits from the bulk electric system and they continue to serve energy to the critical facilities on those circuits. The circuits selected by SDG&E reflect critical infrastructure including police stations, fire stations, schools and cooling centers which broadly provide community support services positively impact the communities in which they are built. To provide these critical services, the microgrid-capable BESS units must be built in areas adjacent to the existing substations which serve these critical circuits. The setback restrictions proposed would have reduced project capacity or eliminated project feasibility entirely.

5. Plume Modeling

General Comment: SDG&E utilizes reputable third-party services to perform plume modeling for its BESS projects, however the specific models identified in the Interim Guidelines were not utilized. The ALOHA model has historically been used by SDG&E for plume modeling. SDG&E agrees with trying to standardize the modeling assumptions and analysis criteria but a specific tool/model should not be dictated. SDG&E is looking to leverage existing wildfire and climate adaption modeling to further enhance plume modeling and provide real-time situational awareness during an event.

6. Hazardous Mitigation Analysis Failure Modes (HMA) and Hazard Identification Analysis (HIA):

General Comment: SDG&E currently utilizes reputable, third-party services to perform HMA and Hazard Consequence Analysis (HCA) for its BESS projects. The goals and informational requirements of the analytical requirements contained in this section should be further defined so as to guide expectations.

7. Emerging Protection Technologies

General Comment: SDG&E supports third-party testing of new emerging technologies and which are geared at suppression or minimizing thermal runaway. All recently installed, SDG&E BESS systems comply with UL 9540 certification which is carried out by a third-party listing firm known as a Nationally Recognized Testing Laboratory (NRTL).

8. Existing BESS Facilities

General Comment: For existing facilities using lithium-ion BESS which are not UL 9540 listed, HMA and Emergency Response Plans must be reviewed and approved. It is not clear how the approval process will be conducted and what will be considered as part of the approval. Similarly, the Draft Guideline does not account for implications if the review does not lead to approval. For example, do the existing facilities have to cease operations? Is there a grace or wind-down period? This Draft Guideline could have significant adverse impacts on system reliability as some of these resources participate in the CAISO market. SDG&E is supportive and has facilitated local fire departments conducting annual site familiarization for emergency response training purposes and is supportive of a yearly review of HMAs and ERPs to ensure emergency personnel are familiar with existing facilities. However, requiring an approval process could have significant implications if there is a non-approval, and such implications should be considered.

9. Cost Recovery

General Comment: SDG&E contracts a third-party Industrial Fire Brigade (IFB). The IFB assists with the development of ERPs for SDG&E's critical systems and facilities, including BESS sites. The IFB also responds to emergency incidents at those facilities. IFB crews utilize their specialized training and equipment to provide important assistance to local first responders during emergency incidents involving BESS. The IFB are also available to maintain a stand-by presence during extended incident operations, thus potentially "freeing up" local fire department resources to return to their normal duties. The Interim Guidelines do not seem to account for such a regime. Flexibility should be provided in the Interim Guidelines to ensure entities are not responsible for the costs of duplicative services they are already providing.

10. Cause and Origin

General Comment: In the event of a fire, the Fire Chief will conduct a root cause analysis, with costs borne by the facility owner. Similar to "Cost Recovery" above, the Interim Guidelines do not seem to account for entities undertaking their own root cause analysis and the sharing such analysis with the local fire department. Flexibility as to who is undertaking the root cause analysis and the cost responsibility for it should be afforded to avoid a duplication of cost or effort.

SDG&E supports the California Fire and Building Code (CFC and CBC), International Fire Code (IFC), National Fire Protection Association (NFPA), and Underwriters Laboratory (UL) specifications, recommendations and standards. As a member of the San Diego community with substantial real-world experience with BESS projects, SDG&E appreciates the opportunity to engage with the County in the ongoing discussions regarding BESS systems in general and their safety in particular. We stand

ready to continue to engage with the County of San Diego in furthering a meaningful discussion of these relevant topics.

Sincerely,

Brittany Applestein Syz

Brittany Syz
Director, Regional Public Affairs

CC:

Hon. Joel Anderson, Supervisor, District 2

Hon. Terra Lawson-Remer, Supervisor, District 3

Hon. Monica Montgomery Steppe, Supervisor, District 4

Hon. Jim Desmond, Supervisor, District 5

San Diego County Chief Administrative Officer Ebony Shelton

San Diego County Clerk of the Board Andrew Potter



San Diego County Board of Supervisors
County Administration Center
1600 Pacific Highway, San Diego, CA 92101

RE: Agenda Item 30 – New Requirements for Battery Energy Storage Systems (BESS) Projects in Unincorporated Areas, County of San Diego Board Supervisors regular Meeting, December 10th, 2024.

Dear Chairwoman Vargas and Members,

Luminia respectfully submits this letter regarding the proposed interim fire protection guidelines for Battery Energy Storage System (BESS) facilities. We are concerned that the current draft guidelines may effectively create a moratorium on BESS projects, undermining critical regional renewable energy and economic objectives.

As a San Diego based renewable energy developer committed to clean and local energy, we share the Board's paramount concern for community safety and the safety of our first responders. We focus on smaller scale distributed-tied projects from 1 MW – 20 MW with the intention of serving our community. The proposed interim requirements present significant challenges that could inadvertently impede responsible clean energy development:

- **Setback and Separation Requirements as written:**
 - Restrict microgrid and energy storage development in high-load areas.
 - Force large-scale projects into rural locations, distancing them from communities most in need of energy resilience.
 - Potentially limit access to critical energy infrastructure for vulnerable populations.
 - 100 ft setbacks from property lines and 10 ft of separation act as an effective moratorium on projects within the built environment, reducing local jobs and property tax revenue.
- **Testing Requirements:**
 - Disproportionately burden smaller battery projects.
 - While comprehensive safety testing is essential, the current language creates ambiguity about the scope and necessity of site-level studies versus manufacturer-provided studies.
- **Alignment with NFPA Safety Standards:**
 - We agree with the California Energy Storage Alliance (CESA) that the code, as written, does not adhere to NFPA 855 safety standards.
 - We urge the County to refrain from adopting requirements contrary to NFPA 855 or those specifically considered and rejected by the NFPA 855 Technical Committee.

We strongly recommend:

1. **Granting a Continuance:**
 - To enable collaborative guideline development with industry stakeholders.
2. **Establishing a Stakeholder Feedback Forum:**
 - Similar to the processes of the California Public Utilities Commission (CPUC) and California Energy Commission (CEC), where all public feedback is recorded.



3. Aligning with NFPA 855 Safety Standards:

- Following the American Clean Power Model Ordinance.
- Implementing setbacks and separation requirements based on the type and size of the BESS, its energy capacity, and the surrounding environment, rather than imposing blanket setbacks.

These modifications will ensure robust safety protocols while maintaining the County's ability to advance clean energy infrastructure and support local economic development.

We respectfully request the opportunity to work collaboratively with the County to refine these guidelines.

Sincerely,

A handwritten signature in black ink, appearing to read "David A. Field".

David A. Field
CEO, Luminia

[Redacted contact information]