Office of Senate Floor Analyses
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THIRD READING

Bill No: AB 1285
Author: Committee on Emergency Management
Introduced: 2/21/25
Vote: 21

SENATE GOVERNMENTAL ORG. COMMITTEE: 15-0, 7/8/25
AYES: Padilla, Valladares, Archuleta, Ashby, Blakespear, Cervantes, Dahle, Hurtado, Jones, Ochoa Bogh, Richardson, Rubio, Smallwood-Cuevas, Wahab, Weber Pierson

SENATE APPROPRIATIONS COMMITTEE: 7-0, 8/29/25
AYES: Caballero, Seyarto, Cabaldon, Dahle, Grayson, Richardson, Wahab

ASSEMBLY FLOOR: 79-0, 6/4/25 - See last page for vote

SUBJECT: State Fire Marshal: lithium-ion battery facilities: guidance

SOURCE: Author

DIGEST: This bill requires the State Fire Marshal (SFM) to develop fire prevention, response, and recovery measures for utility grade lithium-ion battery storage facilities, as specified.

ANALYSIS:

Existing law:

1) Creates the Office of the SFM, within the Department of Forestry and Fire Protection (CAL FIRE), to foster, promote, and develop ways and means of protecting life and property against fire and panic.

2) Establishes the Governor's Office of Emergency Services (OES) pursuant to the Governor's Reorganization Plan No. 2, operative July 1, 2013, and requires OES to perform a variety of duties with respect to specified emergency preparedness, mitigation, and response activities in the state, as specified.

This bill:

1) Requires the SFM, in consultation with OES, to develop fire prevention, response, and recovery measures for utility grade lithium-ion battery storage facilities.

2) Requires the measures to include best practices for the health and safety of emergency services personnel.

3) Requires the measures to include best practices for owners and operators to share timely and accurate information with local emergency managers and public safety agencies regarding incidents.

Background

Author Statement. According to the author's office, "AB 1285 is a timely and critical piece of legislation which addresses concerns surrounding California's the safety of lithium-ion battery storage facilities. The recent Vistra Fire at the Moss Landing Power Plant was the fourth safety incident at the location and a reminder of how quickly lithium-ion battery fires can spread and how dangerous they are for firefighters and nearby residents. This bill enhances firefighter safety, emergency preparedness and will protect first responders and communities that live near lithium-ion battery storage facilities."

Office of the State Fire Marshal. The SFM supports the mission of CAL FIRE by focusing on fire prevention. The SFM provides support through a wide variety of fire safety responsibilities including: regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention within wildland areas; by regulating hazardous liquid pipelines; by developing and reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities. These achievements are accomplished through several major program elements including engineering, education, enforcement, and support from the State Board of Fire Services.

Governor's Office of Emergency Services. OES serves as the state's central hub for all-hazards emergency management, overseeing preparedness, response, recovery, and mitigation across California's diverse regions. As a cabinet-level agency, OES coordinates deployment of state and federal resources, including mutual aid, to support local jurisdictions during crises ranging from wildfires and earthquakes to floods, public health emergencies, and cybersecurity threats. Beyond immediate disaster response, OES leads proactive planning efforts, facilitates training and exercise for first responders, manages emergency communications systems and various wireless alerts, and administers billions of dollars in preparedness and recovery grants. Through its Recovery Division, it also supports long-term community building (including housing, infrastructure, and economic recovery) by helping to secure FEMA resources and guiding local efforts.

Dangers of Firefighting. As noted in the Assembly Emergency Management Committee analysis of this bill, and according the Administrator of the United States Fire Administration, "Fire is a public health and safety problem of great proportions, and firefighting remains one of the Nation's most hazardous professions. On average, there are more than 1.2 million structure fires, nearly 3,000 deaths, thousands of injuries, and scores of individuals displaced annually from fires. Although disasters such as fires can affect everyone, fires can also exacerbate pre-existing challenges in underserved communities across the country.

These impacts are further compounded by poor implementation and enforcement of national building codes and fire risks associated with technology that make fires more common, more intense, and more destructive. These challenges pose heightened risks to the public and to first responders who safeguard our communities, and the challenge continues to evolve. For example, emerging technologies like Lithium-ion (Li-ion) powered devices and harmful chemicals including polyfluoroalkyl substances (PFAS) introduce new and continued risks to our communities and firefighters."

Lithium-ion Batteries. Lithium-ion batteries are comprised of an anode, cathode, separator, electrolyte, and two current collectors (positive and negative). The anode and the cathode store the lithium. The electrolyte carries positively charged lithium ions from the anode to the cathode and vice versa through the separator. The movement of the lithium ions creates free electrons in the anode, which creates a charge at the positive current collector. The electrical current then flows from the current collector through a device being powered (cellphone, computer,

etc.) to the negative current collector. The separator blocks the flow of electrons inside the battery.

Compared to other high-quality rechargeable battery technologies (nickel-cadmium, nickel-metal-hydride, or lead-acid), lithium batteries have a number of advantages. They have one of the highest energy densities of any commercial battery technology, approaching 300 watt-hours per kilogram (Wh/kg) compared to roughly 75 Wh/kg for alternative technologies. High energy densities and long lifespans have made lithium-ion batteries the market leader in portable electronic devices and electrified transportation, including electric vehicles and jets.

Risk of Thermal Runaway. One of the primary risks related to lithium-ion batteries is thermal runaway. Thermal runaway is a phenomenon in which the lithium-ion cell enters an uncontrollable, self-heating state. Thermal runaway can result in extremely high temperatures, violent cell venting, smoke, and fire. Faults in a lithium-ion cell can result in a thermal runaway, and these faults can be caused by internal failure or external conditions. Lithium-ion battery fires and explosions are triggered by the thermal runaway reactions inside the cell and, when stored near or next to another battery or batteries, can set off a chain reaction, making an already tough fire to fight even worse. When they reach thermal runaway, lithium-ion battery fires can burn for hours or even days, until all the flammable chemicals in the battery have been consumed by the combustion reaction.

One such example occurred in Rancho Cordova in June of 2022, when a Tesla Model S, which had been badly damaged in a collision was sitting in a wrecking yard and suddenly erupted in flames. When firefighters arrived the car was engulfed, according to the Sacramento Metropolitan Fire District, "[e]very time the blaze was momentarily extinguished, the car's battery compartment reignited." Eventually, the firefighters used a tractor to create a pit in the dirt, were able to get the car inside, and then filled the hole with water. That allowed the firefighters to suffocate the battery pack and ultimately extinguish the fire, which burned hotter than 3,000 degrees and took more than an hour and 4,500 gallons of water to extinguish.

Fire Prevention, Response, and Recovery Measures. This bill requires the SFM, in consultation with OES, to develop fire prevention, response, and recovery measures for utility grade lithium-ion battery storage facilities. This bill requires the measures to include best practices for the health and safety of emergency services personnel and best practices for owners and operators to share timely and

accurate information with local emergency managers and public safety agencies regarding incidents.

Related/Prior Legislation

AB 841 (Patel, 2025) requires the SFM, in consultation with the Division of Occupational Safety and Health, to develop a working group to make recommendations regarding personal protective equipment used in responding to lithium-ion battery fires, as specified. (Pending on the Senate Floor)

AB 696 (Ransom, 2025) requires the Director of the OES to convene the Lithium-Ion Car Battery Advisory Group to review, and advise the Legislature on policies pertaining to the safety and management of lithium-ion vehicle batteries involved in an emergency situation, as specified. (Pending on the Senate Floor)

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: No

According to the Senate Appropriations Committee, CAL FIRE reports costs of approximately $389,000 in year one, $451,000 in year two, and $430,000 annually ongoing (California Fire and Arson Training Fund). Costs include two additional staff to develop and conduct trainings and to consult with local fire officials, architects, engineers, and contractors on problems of fire and public safety in the design of Battery Energy Storage Systems, construction, and operation of buildings and facilities subject to regulation by the SFM.

OES anticipates costs to consult with the SFM on the development of the measures to be minor and absorbable.

SUPPORT: (Verified 8/29/2025)

California Professional Firefighters
California State Association of Counties
California State Association of Electrical Workers
Coalition of California Utility Employees
City of Laguna Nigel
City of Thousand Oaks
Coalition of California Utility Employees
County of Fresno
County of Santa Barbara
League of California Cities
Rural County Representatives of California
Santa Barbara County Board of Supervisors

OPPOSITION: (Verified 8/29/2025)

None received

ARGUMENTS IN SUPPORT: In support of this bill, the California Professional Firefighters write that, "[t]here has been a recent spate of incidents involving lithium-ion batteries and energy storage systems (ESS). These incidents have been increasing in frequency and severity and have resulted in widespread community impacts, severe toxic exposures, and the injuries of our members as they respond to try and mitigate the damage. It is necessary to take a critical look at the standards surrounding firefighter health and safety issues when responding to these fires."

Further, the "dangers of lithium-ion battery fires cannot be understated, both to the safety personnel responding to them as well as to the surrounding communities. In 2021, a firefighter sustained irreversible injuries while responding to a fire at a battery storage facility in Orange County. Tragically, they were forced to retire due to the extent of their injuries, underscoring the dangers these fires present to our members. On May 15, 2024, a fire at an ESS facility in Otay Mesa burned for 11 days, releasing lethal levels of hydrogen cyanide and prompting a 'shelter in place' order for nearby residents. On January 16, 2025, a fire at one of the world's largest ESS facilities in Moss Landing triggered evacuations and forced the closure of Highway 1."

And, while "firefighters stand ready to respond to and attempt to contain fires involving lithium-ion batteries, more can be done to ensure that we are collectively working to mitigate risks to firefighter health and safety. AB 1285 will direct the experts at the Office of the State Fire Marshal to develop fire prevention and response measures for these facilities, and to encourage their adoption across facilities. This measure takes important steps toward protecting the safety of both firefighters and their communities, and for this reason we are pleased to support this important measure."

ASSEMBLY FLOOR: 79-0, 6/4/25
AYES: Addis, Aguiar-Curry, Ahrens, Alanis, Alvarez, Arambula, Ávila Farías, Bains, Bauer-Kahan, Bennett, Berman, Boerner, Bonta, Bryan, Calderon, Caloza, Carrillo, Castillo, Chen, Connolly, Davies, DeMaio, Dixon, Elhawary, Ellis, Flora, Fong, Gabriel, Gallagher, Garcia, Gipson, Jeff Gonzalez, Mark González, Hadwick, Haney, Harabedian, Hart, Hoover, Irwin, Jackson, Kalra,

Krell, Lackey, Lee, Lowenthal, Macedo, McKinnor, Muratsuchi, Nguyen, Ortega, Pacheco, Papan, Patel, Patterson, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Celeste Rodriguez, Michelle Rodriguez, Rogers, Blanca Rubio, Sanchez, Schiavo, Schultz, Sharp-Collins, Solache, Soria, Stefani, Ta, Tangipa, Valencia, Wallis, Ward, Wicks, Wilson, Zbur, Rivas

Prepared by: Brian Duke / G.O. / (916) 651-1530
8/30/25 16:37:58

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