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POLICY INTENT NOTICE

PIN: 74

SUBJECT

Skilled Nursing Facility (SNF) alternate source of power to maintain safe temperatures, maintain availability of life-saving equipment, and maintain oxygen-generating devices.

Effective: 12/12/2022
Revised: 11/16/2023

PURPOSE

The purpose of this Policy Intent Notice (PIN) is to provide a policy for the implementation of alternate sources of power to maintain safe temperatures, maintain availability of life-saving equipment, and maintain oxygen-generating devices for Skilled Nursing Facility (SNF) buildings as mandated by Assembly Bill (AB) 2511 (Chapter 788, Statutes of 2022).

BACKGROUND

SNFs have previously been required to provide 6 hours of on-site fuel storage for emergency power system sources such as emergency generators and have not been required to provide emergency power for cooling systems. AB 2511 requires that SNFs have an alternative source of power to protect resident health and safety for no fewer than 96 hours for power outages that may result from a public safety power shutoff, an emergency, a natural disaster, or other cause. An alternative source of power is defined as a source of electricity that is not received through an electric utility, but is generated or stored onsite, which may include, but is not limited to emergency generators using fuel, large capacity batteries, and renewable electrical generation facilities. The Centers for Medicare & Medicaid Services (CMS) may have additional certification requirements that will still need to be met by a SNF. These requirements are enforceable by the California Department of Public Health (CDPH) by January 1, 2024.

AB 2511 amended Health and Safety Code (HSC) Section 1418 and added Section 1418.22:

1418.22.

(a) The Legislature finds and declares that it is the public policy of this state to ensure the health and safety of highly vulnerable persons residing in skilled nursing facilities during power outages that may result from a public safety power shutoff, an emergency, a natural disaster, or other cause.

(b) (1) A skilled nursing facility shall have an alternative source of power to protect resident health and safety for no fewer than 96 hours during any type of power outage.

(2) For purposes of this section, "alternative source of power" means a source of electricity that is not received through an electric utility, but is generated or stored onsite, which may include but is not limited to emergency generators using fuel, large capacity batteries, and renewable electrical generation facilities.

(c) For purposes of this section, "resident health and safety" includes, but is not limited to, maintaining a safe temperature for residents, maintaining availability of life-saving equipment, and maintaining availability of oxygen-generating devices.

(d) Facilities that use a generator as their alternative source of power shall maintain sufficient fuel onsite to maintain generator operation for no less than 96 hours or make arrangements for fuel delivery for an emergency event. If fuel is to be delivered during an emergency event, the facility shall ensure that fuel will be available with no delays.

(e) Facilities that use batteries or a combination of batteries in tandem with a renewable electrical generation facility as their alternative source of power, shall have sufficient storage or generation capacity to maintain operation for no fewer than 96 hours. Facilities shall also make arrangements for delivery of a generator and fuel in the event power is not restored within 96 hours and the generation capacity of the renewable electrical generation facility is unable provide sufficient power to comply with state requirements for long-term care facilities.

(f) A facility shall comply with the requirements of this section by January 1, 2024.

POLICY

This PIN implements the requirements specified in HSC §1418.22. The Department of Health Care Access and Information (HCAI) will provide a technical basis from which a SNF can create a plan for identifying existing conditions that are already in compliance with the statute or to identify noncompliance and develop a construction project to achieve a compliant condition as required for acceptance by CDPH. The methods outlined and details described in this PIN indicate acceptable methods and details for achieving compliance with the law. These may be approved by HCAI in either the office or the field. Other methods proposed by the design professional of record to solve a particular problem shall be reviewed by HCAI and, if approved, may also be an acceptable solution.

DEFINITIONS/REQUIREMENTS

Safe Temperature for Residents

"Comfortable temperature" under normal operating conditions: Title 22, California Code of Regulations, Section 72657, Mechanical Systems, requires that "heating, air conditioning and ventilation systems shall be maintained in normal operating conditions to provide a comfortable temperature and shall meet the requirements of Section T17-105, Title 24, California Administrative Code."

Title 24, California Code of Regulations, California Mechanical Code, Chapter 4, VENTILATION AIR, Table 4-A lists temperature range requirements for locations in the building based on use and function. Patient areas are required to have mechanical systems designed to maintain temperatures between 70°-75°F.

"Safe temperature" under emergency conditions: Federal Code of Regulations, Title 42, §483.73(b)(1)(ii)(A), CMS emergency preparedness requirements, states, "alternate sources of energy to maintain - Temperatures to protect resident health and safety and for the safe and sanitary storage of provisions." Title 42, §483.10(i)(6) requires "comfortable and safe temperature levels. Facilities initially certified after October 1, 1990, must maintain a temperature range of 71

to 81 ºF." Furthermore, CMS requires facilities to establish procedures that determine how heating and cooling of their facility will be maintained during an emergency, including when there is a loss of the primary power source. It is noted that facilities are not required to heat and cool the entire building evenly but must ensure safe temperatures are maintained in areas deemed necessary to protect patients, other persons and for stored provisions. (This is to be determined by the facility risk assessment.)

Life-saving Equipment
Life-saving equipment, where provided, shall have power provisions for a period of 96 hours from an alternate source of power. Life-saving equipment may include but shall not be limited to ventilators, AEDs, crash carts with defibrillators, intravenous therapy equipment, feeding pumps, IV pumps, nebulizer machines, suction equipment, and medication dispensing machines.

Oxygen-generating Devices
Oxygen-generating devices, where provided, shall have power provisions for a period of 96 hours from an alternate source of power. Oxygen-generating devices may include but shall not be limited to concentrators and positive pressure apparatus as identified in Title 22, California Code of Regulations, Section 51511.

ANALYSIS

Power Sources
Any new or existing onsite essential and alternate power source shall conform to one or more of the following requirements as applicable:

1) Title 24, California Electrical Code, Part 3, ARTICLE 517.29 through 517.30 for SNF subacute units,
2) Title 24, California Electrical Code, Part 3, ARTICLE 517.40 and 517.41 Essential Electrical Systems for Nursing Homes and Limited Care Facilities,
3) Title 24, California Electrical Code, Part 3, ARTICLE 701 for legally required standby systems,
4) Title 24, California Electrical Code, Part 3, ARTICLE 705, Interconnected Electric Power Production Sources

Acceptable Outage Durations
1) Life-Saving Equipment and Oxygen Generating equipment will be required to be restored to back up power within 10 seconds of failure of normal power source.
2) Cooling and heating equipment will be restored to power within sufficient time to maintain temperature between 71º-81ºF.

96 Hours of On-Site Fuel Storage
Where generators are used as an alternative source of power, sufficient fuel onsite shall be maintained to sustain generator operation for no less than 96 hours. Fuel storage capacity shall meet the requirements of Section 5.5 of NFPA 110 to provide 133% of required capacity. Where other fuel utilizing equipment is used as an alternative source of power, onsite fuel storage shall be provided. If fuel is to be delivered during an emergency event, the facility shall ensure that fuel will be available with no delays. On-site fuel storage shall not be less than 6 hours capacity in a minimum of one tank. For instances where 96 hours of onsite fuel is not provided, CDPH must approve any alternate arrangements that have been made for the delivery of fuel to meet this requirement.

Special Seismic Certification
Special seismic certification (SSC) of new equipment is required for alternate sources of power serving life-safety components, such as emergency and standby power systems per Title 24, California Building Code, Part 2, Volume 2, Section 1705.1. A new healthcare microgrid configured to parallel with a normal distribution board permitted under a project prior to the July 1, 2024, Title 24 supplement will not require SSC. New healthcare microgrid installation projects submitted under the July 1st, 2024 Title 24 Supplement will require SSC per California Electrical Code Section 517.1(B)(3). HVAC equipment will not be required to have SSC, except where required by Section 1705.1 for sub-acute care.

METHODS

Alternative Source of Power
Facilities that use batteries or a combination of batteries in tandem with a renewable electrical generation facility as their alternative source of power shall have sufficient storage or generation capacity to maintain operation for no fewer than 96 hours (6 hours onsite minimum). Facilities shall also make arrangements for delivery of a generator and/or fuel in the event power is not restored within 96 hours and the generation capacity of the renewable electrical generation facility is unable to provide sufficient power to comply with state requirements for skilled nursing facilities. For all options a minimum of 6 hours of on-site fuel is required.

The following three scenarios provide compliance options for existing SNFs to meet HSC §1418.22:

1) Add New Loads to Existing or Replacement Emergency Generator: Where an existing or replacement emergency generator meets Title 24, California Electrical Code, Part 3, ARTICLE 517 (Health Care Facilities) requirements and has adequate capacity to support the loads required to maintain 96 hours of operation, the existing system could be considered compliant if confirmed or modified to meet HSC §1418.22 for safe temperatures, life-saving equipment, and oxygen-generating devices as identified above. A replacement emergency generator and distribution equipment including any new panels feeding the required loads would need to be seismically certified. The emergency generator(s) will need to have provisions for 96 hours of fuel.

2) New or Additional Generator: A new alternate generator and associated equipment could be introduced into the system to feed new or additional loads necessary to meet HSC §1418.22

requirements. The new generator and equipment shall meet Title 24, California Electrical Code, Part 3, ARTICLE 701 (Legally Required Standby Systems) requirements, have special seismic certification, and fulfill the 96-hour on-site fuel requirements. The new standby system in this scenario would feed the cooling equipment, life-saving equipment, and oxygen-generating devices as identified above. In this scenario, the existing distribution system would need to be modified to transfer all HSC §1481.22 loads from existing equipment to new equipment. The existing emergency generator will need to have provisions for 96 hours of fuel as well to support California Electrical Code, ARTICLE 517 life safety branch loads.

3) New Healthcare Microgrid: A new healthcare microgrid could be introduced to the system with any combination of generator(s), turbine(s), fuel cell(s), photovoltaics, battery storage system, or other on-site Distributed Energy Resources (DER's) and be configured to parallel with a normal distribution board at the facility. The new system components shall meet requirements of Title 24, California Electrical Code, Part 3, ARTICLE 705 (Interconnected Electric Power Production Sources), and fulfill the 96-hour fuel requirement. This approach would utilize the existing normal distribution system backed up by the alternate power source (microgrid) to feed all loads including the cooling equipment, life-saving equipment, and oxygen-generating devices. The existing Essential Electrical System (Title 24, California Electrical Code, Part 3, ARTICLE 517.42) will need to remain as is.

On-Site Source of Power Assessment

SNFs shall submit an evaluation of on-site sources of power under the provisions of HSC §1418.22. Appendix A provides a Sample Assessment Form which can be used to identify items for inclusion in the Assessment Report. The assessment report shall include existing conditions and if required describe proposed changes that will result in a SNFs compliance with HSC §1418.22. The Assessment Report shall be submitted electronically using the eServices Portal located on the HCAI website. As part of HCAI's charge from the Legislature, this reporting tool will be used by SNFs and HCAI to achieve the implementation goals of the statute.

Original signed	11/16/2023
Chris Tokas (Deputy Director)	Date

APPENDIX A

[OSHPD 2] HSC §1418.22 Facility Assessment Worksheet

Date:	
Facility ID:	
Facility Name:	
Building Number(s):	BLD-xxxxx
Licensed Beds:	Per BLD-xxxxx
Building Area(s) (SF):	

Heating System Information	
Heating System Type	
Fuel Type	
Cooling System Information	
Cooling System Type	
Power Source	
Emergency Generator	
Make	
Model	
Size (KVA and Voltage)	
Fuel Type	
On-site Fuel Capacity (Hours)	
On-Site Fuel Storage Operating Hours	
Alternate Power Source	
Make	
Model	
Type	
Size (KVA and Voltage)	
Fuel Type	
On-site Fuel Capacity (Hours)	
On-Site Fuel Storage Operating Hours	

Required for SNF Backup Power Assessment online application:

- Information shown in the Worksheet above.
- Floor Plan/Site Plan showing location of systems and area of coverage.
- Documentation substantiating compliance for all systems covered in HSC 1418.22.

Facility key maps are available: https://hcai.ca.gov/construction-finance/facility-detail/

Optional Documents:

- Proposed remediation for non-compliant systems.

SNF Backup Power Source Assessment The following questions are part of the online assessment application				
Section	**Topic**	**Question Number**	**Question**	**Yes Or No**
Safe Temperature for Residents Life-saving Equipment	Heating Equipment	1	Are there heating systems currently in place at the facility?	
		2	Does the existing heating system maintain the resident space at or above 71˚F when utility power is reliable?	
		3	Is a floor plan showing existing heating units and area of coverage included in assessment submittal?	
		4	Is heating system equipment connected to emergency power?	
		5	Is the heating system equipment connected to an alternate power source (not emergency generator)?	
		6	Will the electrical components of heating system work in event of utility power outage?	
	Cooling Equipment	7	Is mechanical cooling provided at the facility?	
		8	Does the existing cooling system maintain the resident spaces at or below 81F when utility power is reliable?	
		9	Is a floor plan showing existing cooling units and area of coverage included in assessment submittal?	
		10	Is cooling system equipment connected to emergency power? (i.e., emergency generator)	
		11	Is the cooling system equipment connected to an alternate power source (not emergency generator)?	
		12	Will cooling system work in event of utility power outage?	

Continued…				
Section	**Topic**	**Question Number**	**Question**	**Yes or No**
Life-Saving Equipment	Ventilators	13	Are there ventilators using 120V for operation/charging at the facility?	
		13a	Are the ventilators connected to emergency power?	
		13b	Will the ventilators work in event of utility power outage?	
	AEDs	14	Are there automated external defibrillators (AED) using 120V for operation/charging at the facility?	
		14a	Are the AED connected to emergency power?	
		14b	Will the AED work in event of utility power outage?	
	Crash Carts	15	Are there crash carts using 120V for operation/charging at the facility?	
		15a	Are the crash carts connected to emergency power?	
		15b	Will the crash carts work in event of utility power outage?	
	Other Equipment	16	Are there other life-saving equipment at the facility?	
		16a	Are the other life-saving equipment connected to emergency power?	
		16b	Will the other life-saving equipment work in event of utility power outage?	
Oxygen-Generating Devices	Concentrators	17	Are there concentrators using 120V for operation/charging at the facility?	
		17a	Are the concentrators connected to emergency power?	
		17b	Will the concentrators work in event of utility power outage?	
	Positive Pressure Apparatus	18	Are there Positive Pressure Apparatus (PPA) using 120V for operation/charging at the facility?	
		18a	Are the PPA connected to emergency power?	
		18b	Will the PPA work in event of utility power outage?	
	Oxygen System	19	Does the facility utilize an on-site, large-scale oxygen-generating systems?	
		19a	Are the oxygen generation devices connected to emergency power?	
		19b	Will the oxygen generation devices work in event of utility power outage?	

Continued…				
Section	**Topic**	**Question Number**	**Question**	**Yes or No**
Existing Generator(s)	Emergency Generator(s)	20	Does your facility currently have a permanent on-site emergency generator?	
		20a	Does the emergency generator have 96 hours of on-site fuel storage?	
		20b	Does the emergency generator have a minimum of 6 hours of on-site fuel storage?	
		20c	Does the facility have a fuel delivery agreement to supply the generator(s) with fuel to comply with the 96 hours operational requirements of HSC 1418.22?	
Existing Alternate Power Source	Alternate Power Source (DER)	21	Does your facility currently have a permanent on-site alternate power source (not including emergency generator)?	
		21a	Does the alternate power source backup the entire normal service?	
		21b	Do all components of the alternate power source have special seismic certification?	
		21c	Does the alternate power source have 96 hours of on-site fuel storage?	
		21d	Does the alternate power source have a minimum of 6 hours of on-site fuel storage?	
		21e	Does the facility have a fuel delivery agreement to supply the alternate power source with fuel to comply with the 96 hours operational requirements of HSC 1418.22?	
Existing Systems	Equipment	22	Is an electrical single line diagram provided in submittal showing utility service, emergency and alternate power source(s) and distribution to HVAC equipment, life-saving equipment, and oxygen-generating device(s)?	