

**Advisory
Guide
Series**

A6

**ALTERNATE SOURCE
OF POWER TO
MAINTAIN SAFE
TEMPERATURES, LIFE-
SAVING EQUIPMENT,
AND OXYGEN-
GENERATING DEVICES**

**FOR
SKILLED NURSING
FACILITIES
[OSHPD 2]**

Office of Statewide Hospital Planning and Development

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Office of Statewide Hospital Planning and Development**

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INTRODUCTION

The California Department of Health Care Access and Information (HCAI) – Office of Statewide Hospital Planning and Development (OSHPD) has prepared this *Advisory Guide* to address frequently asked questions to OSHPD and the California Department of Public Health (CDPH) as they relate to Skilled Nursing Facilities, or OSHPD 2 Buildings, and Health and Safety Code (HSC), Section 1418.22 requirements for alternative source of power to maintain a safe temperature for residents, maintain availability of life-saving equipment, and maintain availability of oxygen-generating devices.

Department of Health Care Access and Information (HCAI)
Office of Statewide Hospital Planning and Development (OSHPD)
has drafted this Advisory Guide in consultation with the
California Department of Public Health (CDPH)

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EXECUTIVE SUMMARY

HSC §1418.22 requires Skilled Nursing Facilities (SNFs) to have an alternate source of power to support the following loads:

- Equipment required to maintain safe temperature for residents,
- Life-saving equipment, and
- Oxygen-generating devices.

Assembly Bill (AB) 2511 (Chapter 788, Statutes of 2022) added HSC §1418.22 and Senate Bill (SB) 1511 (Chapter 492, Statutes of 2024) further amended the law. HSC § 1418.22 requires that the alternate power source(s) used to back up these loads be provided with sufficient fuel onsite to maintain power production for no less than 96 hours (or make arrangements for fuel delivery to meet the 96 hours of operation) during an emergency event. The law stipulates that the alternate power source must operate during power outages that may result from a public safety power shutoff, an emergency, a natural disaster, or other cause. AB 2511 went into effect on January 1, 2023, and required that all SNFs comply with the stated requirements by January 1, 2024. SB 1511 extended the compliance date to January 1, 2026.

Prior to the passing of this law, there were no code requirements for cooling equipment to be backed up power. In previous codes the terms life-saving equipment and oxygen-generating devices were not identified and therefore not specifically required to be backed up by an alternate power source. To meet the law's requirements, these systems will need to all be on an alternate source of power. OSHPD has developed a two-step process for owners to systematically identify the cooling and heating equipment, life-saving equipment, and oxygen-generating devices at their facilities and to determine whether these systems are sufficient and if they will continue to operate in the event of a utility power outage. If the answer is no, they would need to submit a standard construction project to modify the existing system(s) to bring the facility into compliance with HSC §1418.22. After the facility is compliant the client will need to submit an assessment (second step) that verifies that the facility is code compliant.

In addition to the new loads required to be backed up by alternate power, the law now requires operations of these loads for 96 hours. Previous duration requirements for a SNF to maintain emergency loads was six hours, this new requirement is operation for 96 hrs. The new loads identified by HSC §1418.22 are not emergency loads required by the California Electrical Code (CEC), but in addition to the emergency loads required by the CEC to have alternate power backup. This *Advisory Guide* has been prepared to help explain the requirements of HSC §1418.22, and to act as a guide to help facilities ensure that they are in conformance with the law.

The requirements in the law have been adopted in the California Building Code, the California Electrical Code, and the California Mechanical Code, effective July 1, 2024. OSHPD will review applicable SNF projects for compliance with these code requirements. Therefore, this *Advisory Guide* will address two separate issues:

**SECTION 1: SNF ASSESSMENT FOR COMPLIANCE WITH HSC §1418.22, and
SECTION 2: ALTERNATE SOURCE of POWER REQUIREMENTS for SNF
PROJECTS SUBMITTED AFTER JULY 1, 2024.**

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CODE REFERENCES

California Building Standards Code References

2022 California Building Code, Part 2 Volume 2, Title 24, California Code of Regulations. Including the 2022 Supplement effective July 1, 2024

Chapter 17 SPECIAL INSPECTIONS AND TESTS

Section 1705.14.3.1 Special Seismic Certification. [OSHPD 1R, 2 & 5]

2022 California Electrical Code, Part 3, Title 24, California Code of Regulations. Including the 2022 Supplement effective July 1, 2024.

Chapter 5 Special Occupancies

Section 517.1 Scope.

Section 517.2 Definitions.

2022 California Mechanical Code, Part 4, Title 24, California Code of Regulations. Including the 2022 Supplement effective July 1, 2024.

Chapter 3 GENERAL REGULATIONS

Section 325.0 Alternate Source of Power for Safe Temperatures

Access to the referenced codes, and others referenced in this *Advisory Guide*, is provided through the California Building Standards Commission website (<https://www.dgs.ca.gov/en/BSC/Codes>) with active links to each publisher's website for read-only public access versions of the codes. These codes are also known as California Code of Regulations, Title 24.

Part 1, California Administrative Code

Part 2, California Building Code, Volumes 1 and 2

Part 3, California Electrical Code (Note: Accessed through the National Fire Protection Association (NFPA), however, requires the creation of a user account to view the [Free Access - NFPA 70: 2022 California Electrical Code - NFPA 70 \(2020 NEC®\)](#))

Part 4, California Mechanical Code

Part 5, California Plumbing Code

Part 6, California Energy Code

Part 9, California Fire Code

Part 10, California Existing Building Code

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ACRONYMS AND DEFINITIONS

Acronyms and Definitions assist the user in recognizing and identifying various acronyms and terms generally used in the *Advisory Guide*. Please refer to the *Master Glossary of Acronyms and Definitions* on the HCAI website at <https://hcai.ca.gov/document/master-glossary-of-acronyms-and-definitions/> for a list that includes terms used in this *Advisory Guide*, as well as in other OSHPD published documents. Other definitions may also be found in the Title 24.

The Health and Safety Code §1418.22 introduces several new terms and provides definitions to existing terms which slightly alter previous code definitions. The following new terms may be found in the Title 24.

Life-saving Equipment: Part 3, CEC, Section 517.2

Oxygen-generating Devices: Part 3, CEC, Section 517.2

Alternate Source of Power for Safe Temperatures: Part 4, CMC, Section 325.0

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SECTION 1

SNF ASSESSMENT FOR COMPLIANCE WITH HSC §1418.22

A. STATUTE REFERENCE

Health and Safety Code Reference:

Section 1418.22

Access to this Section of the Health and Safety Code may be found at:

<https://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-1418-22/>

B. BACKGROUND

HVAC SYSTEMS

For Skilled Nursing Facilities, the typical HVAC system arrangement includes packaged air handling units with electrically powered refrigerant cooling, and gas burning systems for heating. The California Mechanical Code (CMC) has previously required equipment for heating and fans required for space pressurization to be fed by essential power. The CMC has not required equipment for cooling to be supplied by essential power. Facilities with a central plant will need to identify remote source equipment such as boilers and chillers.

Note: HVAC systems in hospitals were first identified as loads required to be fed by essential power in 1971 National Electrical Code.

SAFE TEMPERATURE

"Safe temperature" under emergency conditions: Federal Code of Regulations, Title 42, § 483.73(b)(1)(ii)(A) and § 483.10(i)(6) defines a safe temperature as a range of 71°F to 81°F. Centers for Medicare & Medicaid Services (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."

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. These procedures are included in the Emergency Preparedness Plan pursuant to HSC §1336.3(b) and made available to The California Department of Public Health (CDPH).

LIFE-SAVING EQUIPMENT

The definition of life-saving equipment lists many pieces of equipment that typically are plugged into electrical receptacles. It is assumed that for sub-acute services within SNFs, there would be emergency (red) receptacles at patient beds that could be utilized

to provide power to bedside life-saving equipment in the event of a utility outage. For standard SNFs, it is not clear if life-saving equipment is normally provided, and if it is, if these systems are backed up by alternate power.

OXYGEN-GENERATING DEVICES

The definition of oxygen-generating devices identifies (two) separate approaches; either a system with larger equipment and distribution throughout the building, or individual devices that typically are plugged into electrical receptacles. It is assumed that for sub-acute services within SNFs, that oxygen-generating devices would already be connected to emergency power. For standard SNFs, it is not clear if oxygen-generating devices will be present, and if they are provided, that they are backed up by alternate power.

ESSENTIAL POWER SYSTEMS

Licensed Skilled Nursing Facilities in California are required to meet California Title 24 requirements. This includes those requirements found in the California Electric Code (CEC). The 2022 California Electric Code, Article 517.41 requires that two independent sources be provided for all essential loads in nursing homes and limited care facilities:

- 1) A normal source generally supplying the entire electrical system and
- 2) one or more alternate (essential) sources.

CEC Article 517.42 requires that essential electrical systems for these facilities be divided into the following (two) branches:

- 1) Life Safety Branch - configured so that all functions listed below shall be automatically restored to operation within 10 seconds after interruption of normal power.
 - Illumination of the means of egress.
 - Lighting of the exit and directional signage.
 - Fire detection and alarm system.
 - Non-flammable medical gas system and vacuum systems alarms.
 - Hospital emergency communication systems.
 - Sufficient lighting in dining and recreation areas to provide illumination to exit ways.
 - Task lighting, battery charger, and selected receptacles in generator set location.
 - Elevator control, communication, and lighting.
- 2) Equipment Branch - configured so that all functions listed below shall be automatically restored to operation at appropriate time-lag intervals following the restoration of the life safety branch to operation.

- Task illumination and selected receptacles in the following:
 - Patient care spaces.
 - Medication preparation spaces.
 - Pharmacy dispensing areas.
 - Nurse stations.
- Supply, return, and exhaust ventilating systems for airborne infectious isolation rooms.
- Sump pumps.
- Smoke control and pressurization systems.
- Kitchen hood supply or exhaust systems.

In addition, the following equipment shall have either automatic or manual connection capabilities:

- Heating equipment to provide heating for patient rooms.
- Elevators.
- Additional illumination, receptacles and equipment shall be permitted to be connected to the equipment branch.

There are new requirements for equipment in SNFs requiring back-up by alternate power sources, namely:

- Equipment required to provide safe temperature for residents,
- Life-saving equipment, and
- Oxygen-generating devices.

These are above and beyond previous code requirements for essential power sources at SNFs. Based on historical data, the majority of SNFs in our state do have an emergency power source (EPS). Typically, the EPS's are generators that back-up heating loads, egress lighting and emergency notification equipment, but these facilities do not generally provide an alternate source to provide back-up power for cooling equipment. Typically, sub-acute SNFs will have life-saving equipment and oxygen-generating devices at their facilities backed up by the EPS. For non-sub-acute SNF's a survey will need to be provided to determine if there are life-saving equipment or oxygen-generating devices at each facility.

While the law does not specifically require that these systems (cooling, lifesaving, and oxygen-generating equipment) be backed up by essential power, typically this is the only alternate power source at existing SNFs in the State of California. Since these loads were not required to be fed by essential power prior to the law, it is doubtful that the new equipment required to be fed by an alternate power source is currently fed by essential power and/or that sufficient capacity is available in the existing essential power sources at the majority of SNF's in the State of California.

ONSITE FUEL STORAGE

2022 CEC Article 700.12 requires that onsite fuel supply for essential power systems be provided to operate the EPS for not less than 6 hours (full-demand operation) for Skilled Nursing Facilities. While the calculated load and sizing requirements of fuel for emergency generators generally results in facilities with onsite fuel storage sufficient for more than 6 hours operation, there are very few facilities that have intentionally provided more than the code minimum. Therefore, it appears that most generators deployed at California SNFs do not have 96 hours of onsite fuel storage.

Note: Regardless of whether modifications are required to bring the facilities electrical distribution into compliance with the law, there is a new requirement for onsite fuel storage to allow the facilities to provide a safe environment for inhabitants for a period of 96 hours. We have identified three (3) possible scenarios on how this might be accomplished, but for all cases, the facilities essential loads, and these newly identified loads, will be required to have provisions to be backed up for 96 hours. The law states that for facilities that use a generator, batteries, or a combination of batteries in tandem with a renewable electrical generation resource as their alternative source of power shall store 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. The option to arrange for delivery of additional fuel for an emergency event will need to be submitted to OSHPD and forwarded to CDPH for final approval. Fuel delivery will need to be arranged to maintain continued operation for the 96-hour duration.

SPECIAL SEISMIC CERTIFICATION

Special Seismic Certification (SSC) is required for life-safety components, such as emergency and standby power systems per 2022 California Building Code, Part 2, Volume 2, Section 1705.14.3.1. SSC is required to ensure that resources utilized to provide alternate power for loads identified in this law will remain functional “during power outages that may result from a public safety power shutoff, an emergency, a natural disaster, or other cause.” Based on these requirements, existing generators and essential power systems are usually code compliant, and therefore, have SSC for their EPSS’s.

Note: SSC is required for generators, batteries, or a combination of batteries in tandem with a renewable electrical generation facility that are used as alternative source(s) of power. Please see [PIN 55 - Special Seismic Certification Preapproval \(OSP\)](#) for further details of SSC requirements.

C. ASSESSMENT

To show compliance with the law’s requirements, SNFs will need to submit a Facility Assessment Online Application to OSHPD. OSHPD will review and if approvable forward to CDPH for their review. See Appendix A for a worksheet and assessment

questions that are needed to be prepared for the online assessment application in a manner that shows the facility complies with HSC §1418.22 for the following systems, equipment and devices:

HVAC Systems – The assessment should be filled out to document if the facilities can provide temperature ranges of 71 to 81° F with existing equipment installed. Next the survey will need to investigate if these temperatures can be maintained. OSHPD will look for compliance with the same standards as required by CMS, namely the facilities will need to show that they have established procedures that determine how heating and cooling of their facility will be maintained during an emergency for 96 hours, 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.

Life-Saving Equipment – The initial facility assessment should clarify what life-saving equipment exists at each facility, if any. Existing life-saving equipment should be identified with an explanation and documentation of how this equipment will remain functional during a power outage for 96 hours. If the existing system does not meet the requirements of HSC §1418.22 this should be stated along with the proposed remediation to bring the facility up to the requirements of the law.

Oxygen-Generating Devices – The initial facility assessment should clarify what oxygen-generating equipment exists at each facility, if any. Existing oxygen-generating equipment should be identified with an explanation and documentation of how this equipment can remain functional during a power outage for 96 hours. If the existing system does not meet the requirements of HSC §1418.22, this should be stated along with the proposed remediation to bring the facility up to the requirements of the law.

Though CDPH will regulate and inspect compliance with HSC §1418.22, OSHPD will review a facility's assessment for compliance and review/comment on the proposed remediation of non-compliant facilities. OSHPD has developed an assessment process to assist in determining compliance. Instructions for submission are presented in Section VIII of this *Advisory Guide*.

SNF Alternate Source of Power Assessment is the process implemented to allow a facility to submit an assessment application to show code compliance with HSC §1418.22. The online application involves a series of questions regarding a facility's heating system(s), cooling systems(s), life-saving equipment, oxygen-generating devices, emergency generator(s), and alternate power source(s). The questions are intended to make visible the various systems that must be compliant with HSC §1418.22. Based on the client's answers to these questions, required documentation will be identified.

Once submitted through the OSHPD eServices Portal online submission, OSHPD will review submitted documentation and decide if the facility complies with HSC §1418.22.

When determined compliant, OSHPD will send the assessment information to CDPH requesting concurrence with the determination. (Note: Historical data may be required to substantiate temperate climates as related to adequacy of the existing or proposed systems as related to safe temperatures.) If CDPH concurs, the assessment application will be closed with compliance and OSHPD involvement with HSC §1418.22 is complete. At this phase of the evaluation process, CDPH will survey the facility and notify facility of the next steps for filing the form showing compliance. If CDPH does not concur with the determination of compliance, a meeting with stakeholders will be held to find a resolution.

The assessment will need to include floor plans of the building to show area of coverage for heating and/or cooling systems and location of units. Where the heating or cooling sources are remotely located from the fan unit, the equipment and location will also need to be shown. Rooms or areas will need to be labeled to indicate function of spaces to identify patient care areas. Where new work is needed to bring the facility into compliance, the documentation can provide a basis of design level of proposed remediation scope of work to enable the facility to comply with the law. OSHPD will review the assessment and proposed remediation plan and provide feedback as to accuracy of the assessment and if the proposed solution will bring the facility into code compliance.

The coverage of the heating and/or cooling systems should provide a safe temperature for all patient care areas. If the facility chooses to implement a cooling center or partially cooled patient care areas, the assessment will need to include documentation to substantiate the facility will be able to provide a safe temperature for patients. The assessment will be based on the facilities emergency preparedness plan to provide a safe temperature to patients during loss of normal power. OSHPD will evaluate the equipment and cooled patient areas provided to meet the safe temperature requirement. However, the final determination for the emergency preparedness plan will be subject to CDPH acceptance. Geographic location will determine the number of hours a facility will need to provide cooling to maintain safe temperatures. Where the location is only subject to a small number of hours of required cooling, a transient space may be acceptable to house patients. Spaces such as a day room may satisfy the cooling requirement for a short duration. Areas with a longer duration or overnight temperatures outside of the safe temperature range will need to provide cooling for sleeping spaces. Facilities will be evaluated on a case-by-case basis based on climatic conditions at the facility location.

Where the building or a portion of the building does not have cooling equipment, it will need to be demonstrated that the building will meet the safe temperature requirements. One method to demonstrate the safe temperature requirement inside the building is met is to provide a building load analysis by a design professional. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) provides weather data at specified stations throughout California. The design temperature is to be based on the monthly climatic design conditions table from the Climate Design Information in the ASHRAE Handbook-Fundamentals. The highest monthly temperature under the 1.0% Monthly Design Dry Bulb temperature is to be used. For mild climates, the

weather station data can be used to show that cooling is not needed to meet the 81F inside temperature. This is typically only for small portions of the state where the monthly temperature 1.0% average does not exceed 75F in the summer. Another method is to provide inside temperature data for the location. Facilities will be evaluated on a case-by-case basis based on climatic conditions at the facilities location.

If desired the facility can submit an assessment to document what aspects of the facility do comply and what aspects do not comply with HSC §1418.22. This voluntary assessment for facilities that are known to be out of compliance can also include a proposed remediation plan. If HCAI determines the facility to be non-compliant with HSC §1418.22, the facility will be notified with the findings and OSHPD will comment on the proposed remediation plan. If the facility does not meet code, remediation of the non-compliant systems will be necessary. See Section VI for next steps.

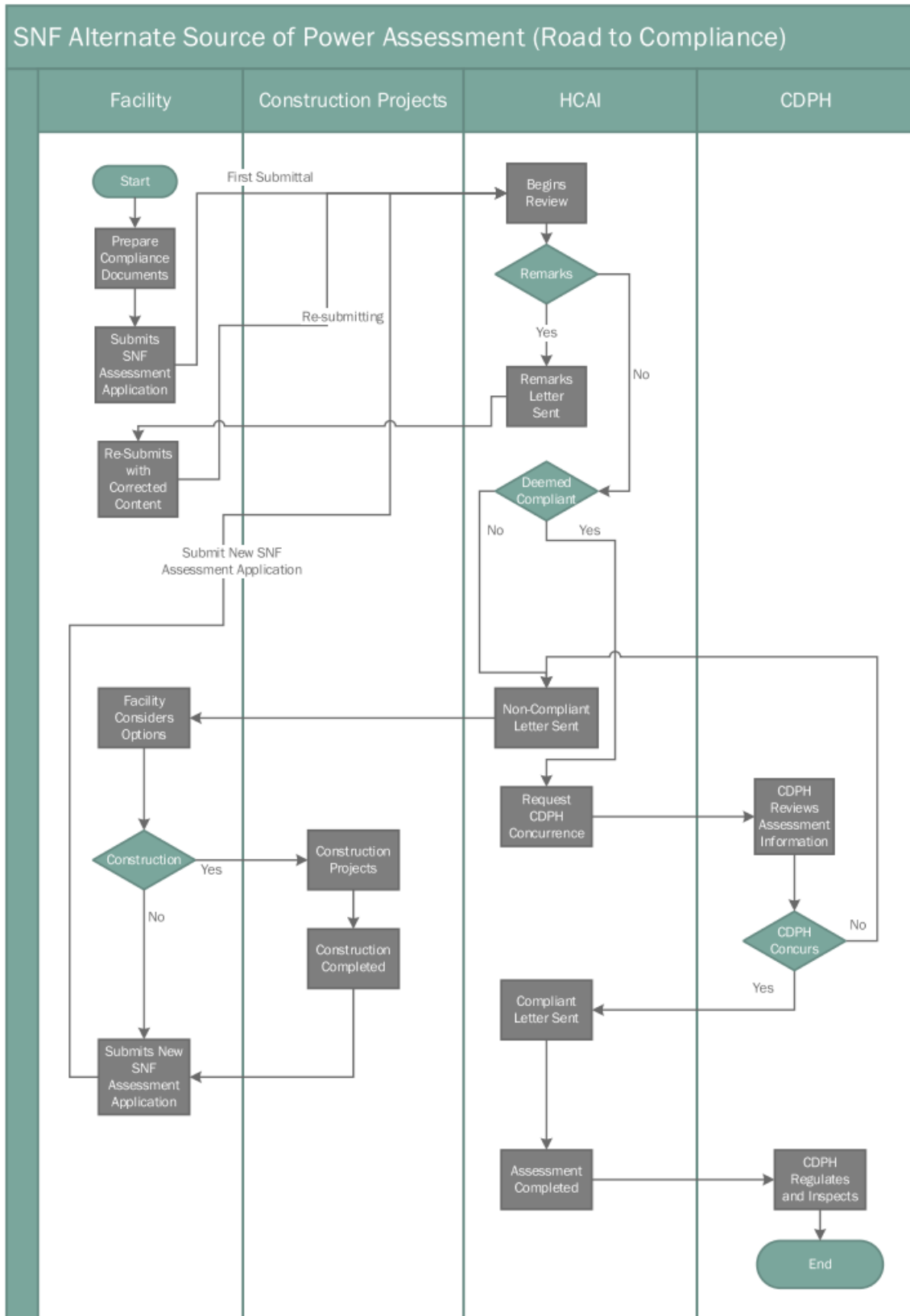


Figure 1 - SNF Alternate Source of Power Assessment Flow Chart

D. WHEN NEW WORK IS REQUIRED

If a facility is determined to be non-compliant, the assessment application is closed without compliance. The assessment is not a construction project, so remediation of non-compliant systems must be submitted to OSHPD in the form of construction projects utilizing the *Application for New Project* via the eServices Portal electronic project tracking. Application for New Project user guide can be found here at [New Project User Guide](#).

Once all construction projects for remediation are complete and closed, the facility will need to submit a new *SNF Alternate Source of Power Assessment* application with documentation to substantiate assertions of compliance by the facility. If determined to be compliant, the process as noted in section V will be completed.

If a facility is determined to be non-compliant after construction projects are closed, additional construction projects will be needed to bring the facility into compliance with HSC §1418.22 and an additional *SNF Alternate Source of Power Assessment* will need to be submitted to determine if the facility has been brought into compliance. This process will continue until compliance is reached.

E. CODE IMPLICATIONS

While HSC §1418.22 introduces new requirements for alternate power source(s) to support loads previously not required to be backed up, there are existing codes that provide requirements for new equipment and resources that might be utilized to meet these requirements. Depending on what resources are used and how back-up power is provided, there are a myriad of code requirements that might come into play. The following is a partial list:

Microgrid White Paper Codes/Regulations - Applicable Codes Matrix							
		Microgrid Power Source					
		Solar (PV's)	Wind	Fuel Cells	Cogen	Energy Storage	UPS
Codes/Requirements							
1	CARB - California Air Resources Board - Air Quality Requirements				x		
2	CPUC - California Public Utility Commission (Rule 21)	maybe	maybe	x	x	maybe	no
3	OSHPD CAN 2-0 Local Approval	x	x	x	x	maybe	no
4	California Building Code	Only if in OSHPD building and/or serving as alternate source					
5	California Fire Code						

Microgrid White Paper Codes/Regulations - Applicable Codes Matrix							
		Microgrid Power Source					
		Solar (PV's)	Wind	Fuel Cells	Cogen	Energy Storage	UPS
5a	1206 Electrical Energy Storage Systems					X	X
5b	1206.2 Stationary Storage Battery Systems					X	X
5c	1204 Photo Voltaics	X				X	
5d	1205 Fuel Cell (NFPA 53 adopted by reference)			X			
6	California Electrical Code						
6a	517 Healthcare Facilities	Only if in OSHPD building and/or serving as alternate source					
6b	690 PV Systems	X				X	
6c	692 Fuel Cell Systems			X		X	
6d	694 Wind Electric Systems		X			X	
6e	700 Emergency power					X	X
6f	705 Interconnected Electric Power Production Sources	X	X	X	X	X	
7	NFPA 30 - Flammable and Combustible Liquids Code			X	X		
8	NFPA 37 - Stationary Combustion Engines and Gas Turbines			X	X		
9	NFPA 54 - National Fuel Gas Code			X	X		
10	NFPA 58 - Liquid Petroleum Gas Code			X	X		
11	NFPA 59A - Production/Storage/Handling of Liquefied Natural Gas LNG			X	X		
12	NFPA 99 - Healthcare Facilities Code	X	X	X	X	X	

Microgrid White Paper Codes/Regulations - Applicable Codes Matrix							
		Microgrid Power Source					
		Solar (PV's)	Wind	Fuel Cells	Cogen	Energy Storage	UPS
13	NFPA 110- Emergency and Standby Power	x	x	x	x	x	
14	NFPA 111- Stored Electrical Energy Emergency and Standby Power Systems					x	
15	NFPA 400 - Hazardous Materials Code			x	x	x	
16	NFPA 853 - Installation of Stationary Fuel Cell Power Systems			x			
17	NFPA 855 - Standard for the Installation of Stationary Energy Storage Systems					x	
18	Centers for Medicare & Medicaid Services (CMS)	x	x	x	x	x	
18a	2012 NFPA 99 - Healthcare Facilities Code						
18b	2012 NFPA 101 - Life Safety Code						

These codes/standards address:

- Air quality requirements.
- Rule 21 requirements for utility interconnection.
- Requirements for local approval for siting of equipment in regard to aesthetics and accessibility.
- Requirements for housing of equipment - seismic certification and restraint for equipment serving and located in HCAI/OSHPD facilities.
- Fire resistance rating requirements.
- Location of equipment in relation to the healthcare facility and property boundaries.
- Requirements for the various on-site power generation units and fuel storage systems.
- Underground and above ground fuel tank requirements.

- Requirements for electrical wiring and equipment used in connection with energy systems.
- Requirements for electrical systems for healthcare buildings, including specific requirements for various on-site power generation systems and energy storage systems.
- Emergency power, Standby power and interconnected Electric Power Production Source requirements.

We recommend that Design Professionals use this as a checklist to help ensure that all aspects of code are considered for the planning and design of new systems to meet HSC §1418.22 requirements.

Please also see the following reminder lists:

<https://hcai.ca.gov/document/fls-reminder-list-above-ground-fuel-storage-cbc>

<https://hcai.ca.gov/document/fls-reminder-list-epss-generator-cbc/>

<https://hcai.ca.gov/document/fls-reminder-list-underground-fuel-storage-cbc/>

<https://hcai.ca.gov/document/fls-reminder-list-fire-authority-approvals-cbc/>

<https://hcai.ca.gov/document/rem-list-fire-life-safety-construction-2016-cbc/>

Please also see applicable PINs and CANs:

<https://hcai.ca.gov/construction-finance/codes-and-regulations/#CANs>

<https://hcai.ca.gov/construction-finance/codes-and-regulations/#PINs>

F. SUBMITTAL INSTRUCTIONS

Submittal Instructions:

The application for the *SNF Alternate Source of Power Assessment* process is an online submission which is accessible via the eServices Portal - eClient Access web page (<https://esp.oshpd.ca.gov>). The user guide can be found at [SNF Alternate Source of Power Assessment User Guide](#). The online application includes a series of questions to confirm that the various systems at a facility either comply or do not comply with HSC §1418.22. The user guide contains step by step instruction for submitting the request for assessment including the assessment questions.

As the responses to the questions are entered, potential requirements will compile. These requirements are intended to provide a list of documentation that will be needed to substantiate compliance. Information about the heating, cooling, emergency generator(s), and alternate power source(s) systems in use at the facility is entered into the application.

Once the application for *SNF Alternate Source of Power Assessment* is submitted, a report is available that displays the results. It will include the questions, answers,

requirements, along with the heating, cooling, emergency generator, and alternate power source(s) information entered into the application. The user guide explains how to print the report.

The assessment and review will focus on the following to determine compliance with HSC §1418.22:

- Heating System
- Cooling System
- Life-Safety Equipment (Ventilators, AED, Crash Carts)
- Oxygen-Generation Devices (Concentrators, Positive Pressure Apparatus, and large-scale oxygen generation)
- Emergency Generator(s)
- Alternate Power Source(s) (Other than generator)

The following are necessary attachments for the review to return a compliant assessment:

- Floor plan showing location of all systems and area of coverage.
- Documentation substantiating compliance for each system listed above with HSC §1418.22.
- Electrical single line diagram.
- Local approvals as required.

Without this information, an assessment of the proposed solution will not be able to be made.

Optional: Documentation of existing conditions and proposed remediation to bring the systems compliant.

If it is already known that certain systems are not compliant with HSC §1418.22; the client can still complete a submission of the assessment and include schematic or narrative remediation plans to receive the review results.

Note: OSHPD has developed a worksheet and questions to assist in preparing for the submission of an online request for assessment. See Appendix A for the worksheet and questions from the online assessment application.

Northern California, contact:

Department of Health Care Access and Information
Office of Statewide Hospital Planning and Development
2020 W. El Camino Avenue, Suite 800
Sacramento, CA 95833
(916) 440-8300 phone or (916) 274-0102 fax

Southern California, contact:

Department of Health Care Access and Information
Office of Statewide Hospital Planning and Development
355 South Grand Avenue, Suite 1900
Los Angeles, CA 90071
(213) 897-0166 phone or (213) 217-8511 fax

If you need assistance in submitting the application, contact the eSP Help desk at (916) 440-8400 or eserv@hcai.ca.gov.

G. POTENTIAL ELECTRICAL DISTRIBUTION SYSTEM SOLUTIONS

The law clearly calls for the requirement to have an alternate power source to back up:

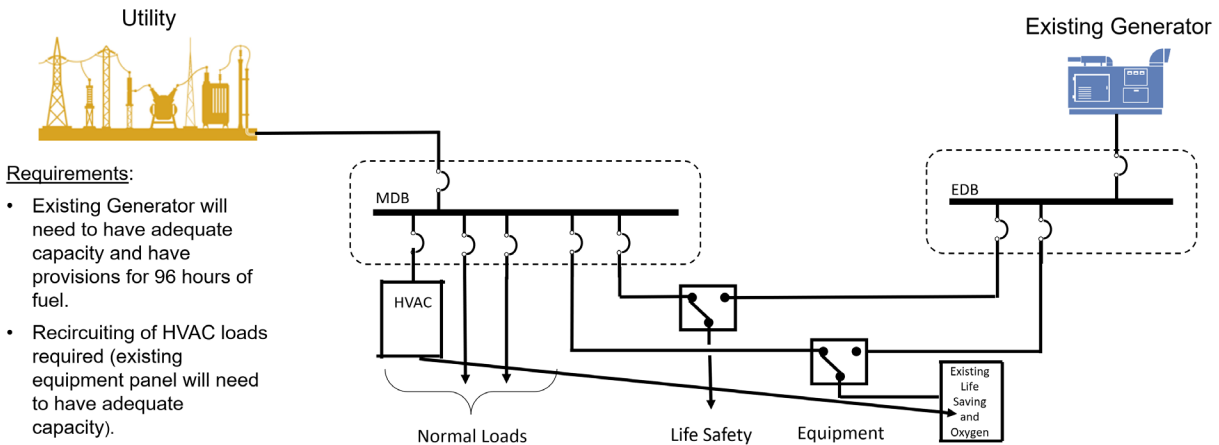
- Equipment required to provide safe temperature for residents (namely cooling),
- Life-saving equipment, and
- Oxygen-generating devices.

However, the new law does not specifically require that these systems be backed up by essential power. To assist the decision makers in finding the “best” approach to bring facilities into conformance with HSC §1418.22, OSHPD is providing the following three potential electrical system modifications.

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:
 - CEC Article 517.29 through 517.30 for SNF Subacute Units
 - CEC Article 517.40 and 517.41, *Essential Electrical Systems for Nursing Homes and Limited Care Facilities [OSHPD 2]*
- 2) New Alternate Source (Generator):
 - CEC Article 701 for Legally Required Standby Systems
- 3) New Healthcare Microgrid:
 - CEC Article 705 Interconnected Electric Power Production Sources

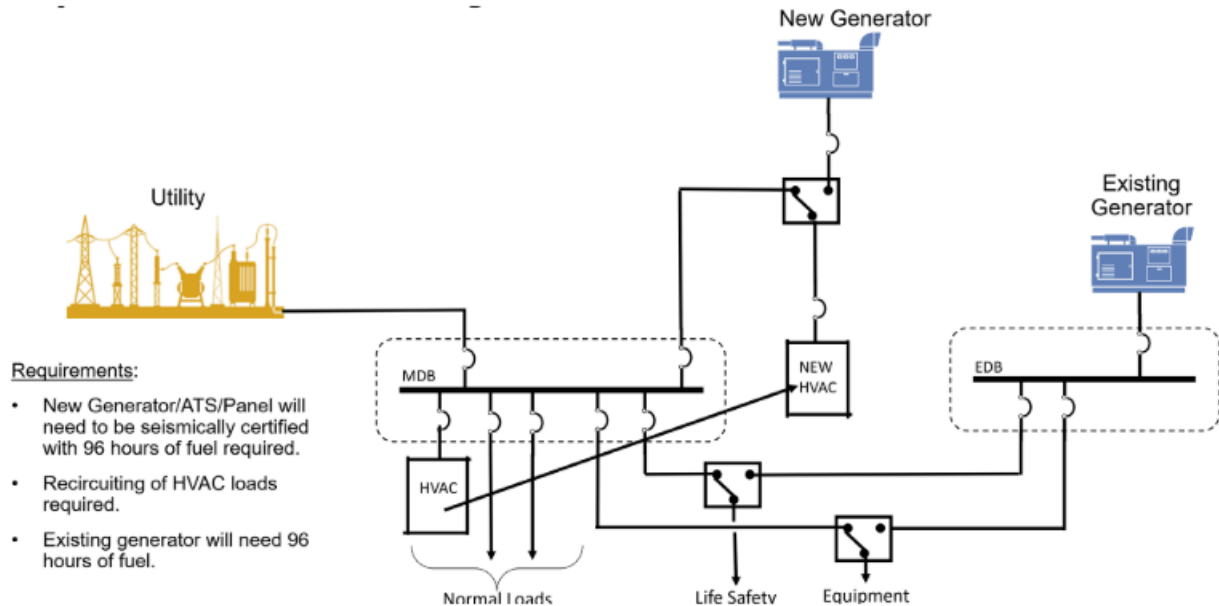
1) Existing Generator



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 existing essential loads and added loads required by HSC §1418.22 to maintain 96 hours of operation, the existing system could be considered compliant if:

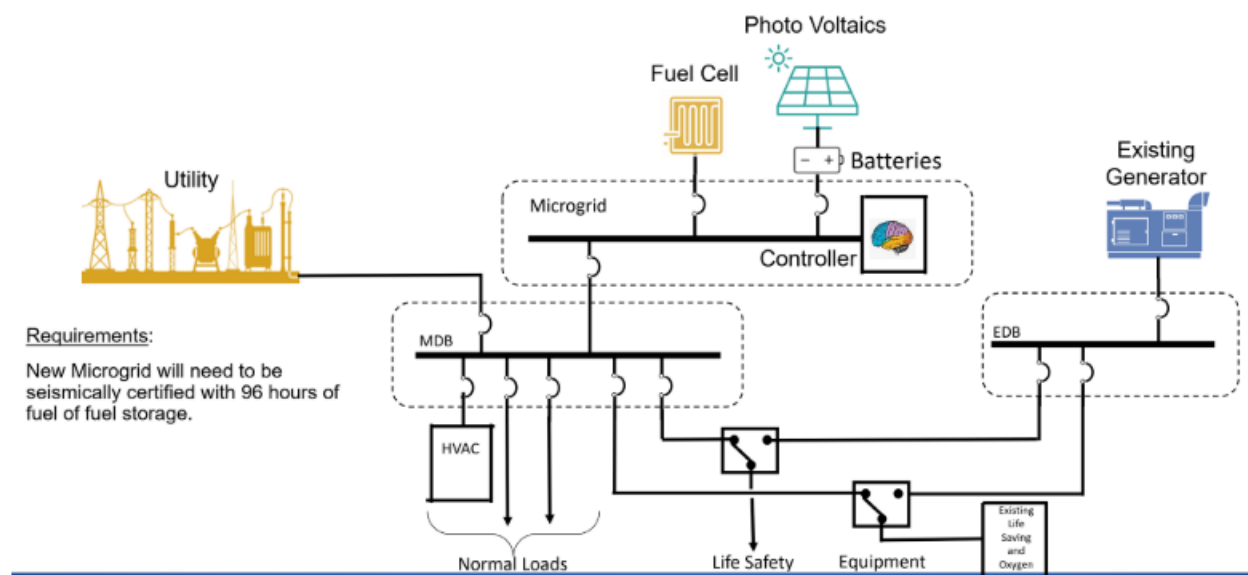
The electrical distribution system is confirmed or modified to feed all loads associated with HSC §1418.22 (i.e., equipment required for safe temperatures, life-saving equipment, and oxygen-generating devices as identified above). For this scenario the replacement emergency generator and distribution 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 Stand-by Generator



New or Additional Generator: A new 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 could be utilized to 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 loads from existing equipment to new equipment. The existing emergency generator would need to have 96 hours of fuel provisions.

3) New Microgrid Parallel w/Utility



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), have special seismic certification and fulfill the 96-hour fuel requirement. For this scenario, all new equipment including energy producers will need to be seismically certified. 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 in operation, however the fuel system will not need to be modified to support 96 hours of run time (existing 6 hours minimum will be sufficient).

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SECTION 2

ALTERNATE SOURCE OF POWER REQUIREMENTS FOR SNF PROJECTS SUBMITTED AFTER JULY 1, 2024

A. APPLICABLE SNF PROJECTS

There are new requirements in Title 24 for equipment in SNFs requiring back-up using an alternate power sources, these are:

- Equipment required to provide safe temperature for residents,
- Life-saving equipment, and
- Oxygen-generating devices.

SNF projects submitted to OSHPD after July 1, 2024, will be reviewed to determine whether these new requirements are applicable. The kinds of projects to which the requirements apply include, but are not limited to the following:

Remodel projects, such as:

- Change from SNF to Subacute.
- Adding or converting to SNF beds in an existing SNF.
- Replacement of an HVAC system serving patient areas.
- Addition of a new HVAC system serving patient areas.
- Replacement of a generator.
- Addition of a generator.
- Addition or changes to on-site fuel storage.
- Addition or changes to an alternate source of power.
- Adding or replacing lifesaving equipment or oxygen generating devices.

Additions or new SNFs:

- An addition to a SNF that adds new patient beds or patient areas.
- Construction of a new SNF.

B. HVAC SYSTEMS

Replacement of existing or installation of new HVAC equipment serving patient care areas must be capable of always providing temperature ranges of 71 to 81° F, including during loss of normal power, before and after disasters, etc. unless the facility can demonstrate that the requirement is met with existing systems through an assessment as detailed in Section 1.

In addition to the requirements for HVAC replacement in OSHPD's *How-to Guide 4*, or other building standards for HVAC equipment that is not roof-mounted, mechanical equipment required to maintain a safe temperature for residents must be powered by an alternate power source. Refer to CMC Section 325.0.

C. LIFE-SAVING EQUIPMENT

Life-saving equipment is used to save or sustain the life of a patient/resident in a SNF. Life-saving equipment may include, but is not limited to the following:

- Ventilators.
- Automated External Defibrillators (AEDs).
- Crash carts with defibrillators.
- Intravenous Therapy Equipment
- Nebulizer machines.
- Suction equipment.
- Medication dispensing machines.

Life-saving equipment must be capable of functioning during loss of normal power, before and after disasters, etc. Unless the facility can demonstrate that this requirement is met with existing alternative power sources through an assessment as detailed in Section 1, or the existing Essential Electrical System (EES), the facility must provide this capability. Refer to CEC Section 517,1(B) *OSHPD 2*.

D. OXYGEN-GENERATING DEVICES

Oxygen-generating devices are used to extract or make concentrated oxygen rich blends of air for human use. Oxygen-generating devices may include, but is not limited to, concentrators and positive pressure apparatus.

Oxygen-generating devices must be capable of functioning during loss of normal power, before and after disasters, etc. Unless the facility can demonstrate that this requirement is met with existing alternative power sources through an assessment as detailed in Section 1, or the existing EES, the facility must provide this capability. Refer to CEC Section 517,1(B) *OSHPD 2*.

E. ALTERNATE POWER SOURCE

Title 24 requires the following to have an alternate power source for back up:

- Equipment required to provide safe temperature for residents (especially cooling),
- Life-saving equipment, and
- Oxygen-generating devices.

However, Title 24 does not specifically require that these systems be backed up by the EES. To assist the decision makers in finding the “best” approach to bring facilities into conformance with CEC, OSHPD is providing three potential electrical system modifications: See POTENTIAL ELECTRICAL DISTRIBUTION SYSTEMS SOLUTIONS in Section 1.

Unless the facility can demonstrate that this requirement is met with existing alternative power sources through an assessment as detailed in Section 1, or the existing EES, the facility must provide this capability. Refer to CEC Section 517,1(B) *OSHPD 2*.

F. SPECIAL SEISMIC CERTIFICATION (SSC)

If a new alternate power system is required to provide the required back-up power for equipment required to provide safe temperature for residents, for life-saving equipment, and for oxygen-generating devices, the following equipment and components must be seismically certified. (Refer to CBC 1705.14.3.1):

- Generators.
- UPS and batteries.
- Renewable electrical generation and control equipment.
- Panelboards as defined in the CEC Article 100.
- Manual and automatic transfer switches.
- Switchgear and switchboards.

Please see [PIN 55 - Special Seismic Certification Preapproval \(OSP\)](#) for further details of SSC requirements.

G. ON-SITE FUEL SUPPLY

The alternate power source, or the EES if it provides back-up power, for equipment required to provide safe temperatures for residents, for life-saving equipment, and/or oxygen-generating devices, must have a minimum 96 hours of fuel onsite to maintain generator operation, or alternate power source operation, for no less than 96 hours. Alternatively, the facility may make arrangements for fuel delivery for an emergency event. If fuel is to be delivered during an emergency event, the facility must ensure that fuel will be available with no delays. The option to arrange for delivery of additional fuel for an emergency event will need to be submitted to OSHPD and forwarded to CDPH for final approval. Fuel delivery will need to be arranged to maintain continued operation for the 96-hour duration.

H. PROJECT SUBMITTAL INSTRUCTIONS

In addition to code citations listed in this *Advisory Guide*, as with all construction, remodeling, and alteration of hospital buildings and structures, are required to be

designed in conformance with applicable codes as noted in OSHPD [CAN 1-0 Enforceable Codes](#).

For those projects which are affected by local planning and zoning, evidence of approval is required as part of the submittal to OSHPD. See OSHPD [CAN 2-0 Jurisdiction](#).

The *Assessment* portion of this *Advisory Guide*, or portions thereof, may be useful as a checklist or guide in the preparation and submission of project documents to aid in determining compliance with CBC Section 1705.14.3.1, CEC Section 517.1, and CMC Section 325.0. Inclusion of this assessment with all OSHPD submittals for projects related to equipment required to provide safe temperatures for residents, for life-saving equipment, oxygen-generating devices, alternate power sources, fuel storage, and other related projects will facilitate a more expeditious review.

OSHPD projects that are created with an open project number via the eServices Portal that are related to patient care directly or indirectly must have a functional program (refer to CAC Section 7-119), and either a preliminary submittal (refer to CAC Section 7-123) or final submittal (refer to CAC Section 7-125) received by the Office within 10 days. Open OSHPD project numbers not accompanied by a submittal within 10 days of the creation of said numbers will be cancelled.

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 Alternate Source of 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 Alternate Source of Power 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?	
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?	

SNF Alternate Source of Power Assessment The following questions are part of the online assessment application					
Section	Topic	Question Number	Question	Yes or No	
	Crash Carts	14b	Will the AED work in event of utility power outage?		
		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?		
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?		

SNF Alternate Source of Power Assessment The following questions are part of the online assessment application				
Section	Topic	Question Number	Question	Yes or No
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)?	

APPENDIX B

[OSHPD 2] HSC §1418.22 FREQUENTLY ASKED QUESTIONS

Q1: We understand that the first step to showing compliance with the requirements specified in the Health and Safety Code §1418.22 (HSC §1418.22) is to fill out a SNF Source of Power Assessment application. Where can I find the assessment user guide?

A1: The assessment begins by completing the online assessment application. User guide can be found at: hcai.ca.gov >> Building Safety & Finance>> eServices Portal Information > eServices Help & User Guides > User Guide #22 (SNF Alternate Source of Power Assessment). This is the link: <https://hcai.ca.gov/document/section-22-snf-alternate-source-of-power-assessment/>.

Q2: Are all SNF's required to go through the assessment and upgrade their generators to meet the 2026 deadline?

A2: The law requires that all standalone SNFs comply with HSC §1418.22 by January 1, 2026. SNFs that are a distinct part and within the hospital building do not need to provide an assessment. OSHPD has developed the assessment form to determine compliance or to determine deficiencies and what is required to bring the facility into compliance. We recommend that all facilities complete an assessment and submit to OSHPD for review. This will either show compliance with HSC §1275 or identify deficiencies. A proposed solution should be submitted along with the assessment to propose how deficiencies will be resolved. OSHPD will review and comment on proposed solutions. Once OSHPD and the client agree on the scope of work to resolve deficiencies, the design can begin and can be submitted as a standard project. Once the design is approved, construction can begin. A standard construction project should be opened to implement changes submitted to and agreed upon by OSHPD to make the facility compliant with HSC §1418.22. Once the construction project is complete, another assessment should be performed and submitted to OSHPD to show that the facility meets minimum requirements of HSC §1275. Once OSHPD confirms that the assessment shows compliance with HSC §1418.22, this completed assessment survey will be sent to CDPH for final approval. Note there are other options than upgrading generators.

Q3: When is the completion of the assessment application required?

A3: There is no defined review timeline for the initial assessment application; however, facilities are required to have construction and final assessment (showing compliance with HSC §1418.22) completed by the January 1, 2026.

Q4: What are facilities required to do if their facility already meets the requirements of HSC §1418.22?

A4: The facilities will need to submit an assessment application in eServices Portal. A sample checklist of required items is available at the end of PIN 74. The User Guide is available at: <https://hcai.ca.gov/document/section-22-snf-alternate-source-of-power-assessment/>

Q5: There is no defined review timeline for plans, when should a facility expect its plans to be approved?

A5: Completeness of plans will always affect review time (the more complete the quicker the review process can be completed). Be advised that for projects that add above grade equipment, local approval, as well as OSHPD approval, will be required. Construction cannot start until after plan approval and a building permit is issued.

Q6: Because CMS requires compliance with 2012 NFPA 99 and 2012 NFPA 101, CMS conditions of participation and qualification to receive reimbursements for Medicare/Medicaid will not be met if equipment other than an emergency generator is used for the code mandated Emergency Power Source. Will this affect the approach to HSC §1418.22 upgrades?

A6: Please note that CMS issued a categorical waiver on March 31st, 2023, which permits new and existing healthcare facilities subject to CMS requirements to utilize alternate sources of power other than a generator set or battery system only in accordance with the 2021 edition of the NFPA 99, 2023 edition of the National Electric Code (NFPA 70), and associated references.

The categorical waiver excludes long-term care (LTC) facilities that provide life support as the LTC requirements at 42 CFR 483.90(c)(2) requires these facilities to have an emergency generator without exception. So if a SNF does not provide life support, the Emergency Power Source would not need to be a generator, to meet CMS conditions of participation and qualification to receive reimbursements for Medicare/Medicaid.

For the SNF's that do provide life support, the 2012 edition of NFPA 99 still requires the emergency electrical system (EES) be supplied by a generator or battery system. For the new loads required by HSC 1418.22 (i.e. HVAC to maintain safe temperatures, life-saving equipment and oxygen-generation devices), which unique to CA, CMS does not require an emergency generator be utilized as an alternate source. So, if the facility opts to provide alternate power sources (other than generators) independent of the required generator to back up essential loads, that would appear to not jeopardize CMS's reimbursement policy. We recommend that you coordinate with CMS to confirm this "unofficial" interpretation.

Q7: If SNF's have been previously permitted, can the design team assume that the facility has met life safety back up requirements?

A7: Yes, however please note this law does not address life safety branch requirements, this law requires life-saving equipment to be backed up for 96 hours by a seismically compliant alternate power system. Life-saving equipment has a different definition than life safety branch equipment:

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.

Life Safety branch - Shall supply power for egress lighting, exit signs, alarm and alerting systems, communication systems, lighting in dining and recreation area(s), lighting and receptacles at Generator set location, cab lighting and controls for elevators as detailed in CEC Article 517.43.

Q8: Does emergency power need to be connected to heating and cooling equipment?

A8: Previous versions of the California Electric Code (CEC) required heating to be supplied by essential power. The law now also requires an alternate source for cooling. Note: this could be accomplished via essential power or by other alternate power. Two solutions that would meet the requirements of the law and codes, are:

- 1) CEC Article 701 - Legally Required Stand-by System, and
- 2) CEC Article 705 - Interconnected Electrical Power Supply Sources.

Other solutions are welcome as well. All proposed solutions will be reviewed to determine compliance with current codes and requirements specified in HSC §1418.22.

Q9: Does the alternate power source need to provide power for existing HVAC equipment? Will other options be considered?

A9: OSHPD does not specify the method of cooling required to allow flexibility for each designer to determine the most appropriate equipment to meet the temperature control requirements. All submitted plans will be considered and reviewed for code compliance and compliance with HSC §1418.22.

Q10: It was recommended that if the facility intends to shelter occupants in place that kitchen/cooking facilities should be required to be powered by the alternate power source?

A10: OSHPD does not intend to check power sources for kitchen/cooking facilities to show compliance with HSC §1418.22. **Note:** CMS Guidance for Emergency Preparedness -Appendix Z of the State Operations Manual (SOM) requires facilities to develop an emergency preparedness plan and includes language for provisions including, but not limited to, food and water for facilities whether they evacuate or shelter in place.

Please see SOM Appendix Z for additional and more specific CMS requirements.

Q11: What is the acceptable delay time for alternate loads to be picked up?

A11: Acceptable delay times:

- 1) Life-saving equipment and oxygen-generating devices will be required to be restored to operation via alternate power within 10 seconds of failure of normal power source.
- 2) Cooling and heating equipment (if required) will be restored to operation via alternate power within sufficient time to maintain temperature between 71 to 81°F.

Q12: Could the alternate system be used daily, or does it need to remain “off” and be only used when normal power to the site is disrupted?

A12: Normally-off and normally-on backup systems can both be configured to meet the requirements for alternate power for SNFs. Three possible configurations for the alternate system(s) are:

- 1) CEC Article 517 - Healthcare Essential Electrical System - normally-off
- 2) CEC Article 701 - Legally required standby system - normally-off
- 3) CEC Article 705 - Interconnected Electric Power Production Source - normally-on

For both the “normally off” and the “normally on” systems, the 96-hour fuel supply (6 hours on site min) must be always maintained. **Note:** CDPH will need to sign off on any designs that do not provide 96-hours of fuel on site.

Q13: Can a hybrid solution be used to meet 96-hour back-up requirements?

A13: Yes, multiple resources can be utilized to meet the law’s requirements for alternate power. Calculations will need to be provided to detail how the 96-hour run time of alternate power source(s) are provided. Commissioning of the final installation will be required to demonstrate that the installation meets criteria presented in design and calculations.

Q14: When installing a new generator under CEC Article 701 requirements, please confirm that it would then be required to have selective coordination rather than 0.1 coordination per CEC Article 517.31(G).

A14: Yes, that requirement can be found in CEC Article 701.27 Selective Coordination.

Q15: If PVs are used as a component of the alternate source, would just the feed to the building be evaluated for code and HSC §1418.22 compliance or would the PV’s, collectors, inverters etc., need to be seismically certified?

A15: If the PVs or any other Distributed Energy Resource(s) (DERs) are used as a component of the alternate source designed to provide back-up for cooling equipment, life-saving equipment and oxygen-generating devices, the entire system: PV panels,

collectors, inverters etc., would need to meet the requirements of HSC §1418.22, (i.e., have special seismic certification and have provisions for 96-hours of run time).

Q16: Will the existing electrical infrastructure need to have Special Seismically Certification (SSC) to meet HSC §1418.22 requirements?

Q16: No, it is assumed that the existing facilities are code compliant, so just the new equipment including DERs, ATSS, Distribution Boards, Panels etc. would need to have SSC.

Q17: Will existing HVAC equipment need to have Special Seismic Certification (SSC) to meet HSC §1418.22 requirements?

A17: Existing HVAC equipment will not be evaluated for SSC for HSC §1418.22 driven upgrades. The law only addresses new sources.

Q18: Can back-up systems be provided that are not seismically certified?

A18: All components of required alternate source(s) added to meet HSC §1418.22 requirements will need to have Special Seismic Certification (SSC) to ensure that they can provide power “during power outages that may result from a public safety power shutoff, an emergency, a natural disaster, or other cause”, which is the language contained in the bill.

Q19: Would this mean that OSP numbers are required for all HVAC Equipment?

A19: HVAC equipment will not be evaluated for Special Seismic Certification (SSC) for HSC §1418.22 driven upgrades. SSC will only apply to the alternate power sources.

Q20: Can there be a designated area for each SNF that meets temperature control requirements, or would this have to be met project wide?

Q20: The assessment will need to show which portions of the building are required for patient care, and temperature control will need to be provided to maintain temperatures between 71 to 81°F in these areas. 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 should be determined by the facility risk assessment.)

Q21: CMC 321.0 requires all heating to maintain a minimum temperature of 60°F in patient areas to be on essential power. Why is the minimum temperature for the HSC §1418.22 listed at 71°F?

A21: HSC §1418.22 states a facility shall maintain a safe temperature. The temperature requirements were based on the federal requirements that licensing must adhere to. The 60°F temperature is a state regulation under Title 24 for design and installation of equipment. The federal requirement is an operational requirement. Existing

installations where equipment was designed to the lower temperature will need to address the operational temperature requirement in the Emergency Preparedness Plan.

Q22: The bill states “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.” Six (6) hours of fuel onsite is the required minimum, with arranged delivery for the required duration of 96-hours. How can we ensure that if we have 6 hours of fuel on site that a delivery can be made within this time? (Note: during earthquakes the roads might be down.)

A22: Demonstration of compliance with this requirement will need to be included in the assessment report submitted to OSHPD. Acceptance by CDPH is required.

Q23: Will a natural gas connection for fuel to onsite alternate power sources, satisfy my requirement for the 96 hours, or will I still need to store fuel onsite?

A23: The facility will need to store 96 hours of fuel on site, or as the bill states - make arrangements for fuel delivery for an emergency event (sufficient to operate alternate power equipment for 96 hours). If the facility chooses to not store the full 96 hours of fuel on site, the facility will need to always store a minimum of 6 hours of fuel on site. Submit documentation to clarify the arrangements made for fuel delivery if 96 hours of fuel will not be provided on site. Any configurations and/or arrangements other than 96 hours of fuel stored onsite will need to be reviewed and approved by CDPH.

Q24: If fuel cells are used as a component of the alternate source, and they require natural gas service, which are required to have seismic switches to shut off gas service, in the event of an earthquake, how can we meet 6 hours min onsite fuel requirements?

A24: We have not seen any designs to date for SNF’s to address this challenge. One approach for natural gas DER’s would be to provide units with a dual fuel option (natural gas and propane for instance) and to provide 6 hours of propane stored on site, with contracts in place for delivery of propane (if acceptable by CDPH) to meet the 96-hour requirement.

Q25: How will HCAI handle fuel suppliers, required to guarantee fuel delivery if 96 hours of fuel is not stored on site?

A25: If the facility decides to not store 96 hours of fuel on site, they will need to store a minimum of 6 hours of fuel on site and arrange for fuel supplier to guarantee fuel delivery within 6 hours sufficient to operate back up power equipment for 96 hours. Demonstration of compliance with this requirement will need to be signed off by CDPH.

Q26: In order to meet the 96-hour fuel requirements, can an above ground tank be utilized?

A26: This *Advisory Guide* does not go into detail about methods of fuel storage. Above grade tanks that are designed to meet code would be acceptable. **Note:** any above grade equipment will need to have local as well as OSHPD approval.

Q27: If existing heating is provided by natural gas, diesel, or propane, is there any additional requirement for an alternate fuel source? Note: currently an alternate fuel source is not required for heating equipment at hospitals.

A27: HSC §1418.22 as written requires an alternate power source for specified items (temperature control equipment, life-saving equipment, and oxygen-generating devices). Fuel and/or arrangements must be provided to operate the alternate source(s) for 96 hours. An alternate fuel source for fuel burning equipment is not included in the scope of this new law and will not be evaluated for SNF projects.

Q28: Is the 96 hours of fuel based on design load or the generator's rating?

A28: NFPA 110 requirements for sizing fuel tanks based on the generator's rating will apply for both the CEC Article 517 (SNF Emergency Power) and the CEC Article 701 (Legally Required Standby Systems) solutions. If the design is configured as a CEC Article 705 Interconnected Electric Power Production Sources solution, the sizing of the fuel tank (or other stored energy resources) could be determined by actual demand load taken at 125% demand factor (see CEC Article 220).

Q29: 2022 CFC Section 1207.1.1(Table) Energy Storage System (ESS) lists threshold quantities for Lithium-ion batteries not to exceed energy capacity of 20kWh. If this capacity is exceeded it will trigger requirements for more plan reviews, permitting and reporting to CalEPA.

A29: Agreed, if the battery system capacity exceeds that in Table 1207.1.1 additional requirements will need to be met. These include but not limited to additional permits and approvals, potential for the requirement of a fire resistance rated room, etc. There are several requirements throughout the California Fire Code (CFC) and California Building Code that will also need to be met. Please see all applicable codes.

Q30: How will designers address load calculations for cooling equipment?

A30: The current code California Electrical Code (CEC) Article 220, and OSHPD [PIN 38 Electrical Load Verification Guideline](#) list acceptable means of documenting load calculations. For these projects, based on the nature of mechanical loads (cooling), required to be backed up, any existing demand load calculations associated with mechanical equipment will need to be based on values metered during the summer months (June 1 - August 31).

Q31: Can the designer use load shedding values, or consider the partial use of cooling equipment if existing equipment is sized to cool below 81 degrees, in load calculations?

A31: For load calculations that do not use nameplate data and/or California Electric Code (CEC) values for mechanical systems (see CEC Article 430), documentation will

need to be provided to demonstrate, automation of set-back conditions and anti-override provisions along with calculations to justify loads.

Q32: Are there any special requirements for the location of Alternate Power Sources regarding the documented floodplain levels?

A32: Yes, based on the law's requirement for the alternate power source(s) to operate "during power outages that may result from a PSPS event, an emergency, a natural disaster, or other cause" the alternate power source(s) will need to be installed above the flood plain level. The alternate power sources will have essentially the same requirements that can be found in the California Electrical Code (CEC) Article 517.30(C) - Location of Essential Electrical System Components.

REVISION HISTORY

Version 1.3	December 2024	Newly enacted Senate Bill 1511 information is added to the PIN. The Bill changed the compliance date to January 1, 2026.
Version 1.2	July 2024	Clarify safe temperature ranges and Federal Code requirements. Clarify how safe temperature ranges can be researched and how they can be achieved. Include Special Seismic Certification requirements. Clarify that an initial assessment is not required, but advisable. The AB 2511 January 1, 2024 due date is for facility compliance, not the assessment submittal.
Version 1.1	June 2023	SNF Backup Power Source changed to SNF Alternate Source of Power. Figure 1 updated. Information about egress lighting and emergency notification equipment added.
Version 1.0	March 2023	First Issued

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