



# Emergency Preparedness Plan (EPP) Series

## Power Outages

**Eric Cote**, Project Director  
Powered for Patients

**Michelle Burkeen**, Manager Account Management, Key Accounts  
Arizona Power Service

**Jason Belden**, Director of Emergency Preparedness and Physical Plant Services  
California Association of Health Facilities (CAHF)

Wednesday, April 17, 2024

# Upcoming May 22 EPP Webinar

- 4th Wednesday of May!
- 3:00 p.m. PT
- Cybersecurity Attacks
- Register at: [www.hsag.com/epp-series](http://www.hsag.com/epp-series)

# Today's Speakers

## **Jason Belden**

*Director of Emergency  
Preparedness and  
Physical Plant Services*  
California Association  
Health Facilities (CAHF)

## **Eric Cote**

*Project Director*  
*Powered For Patients*

## **Michelle Burkeen**

Manager Account Management, Key Accounts  
Arizona Public Service (APS)

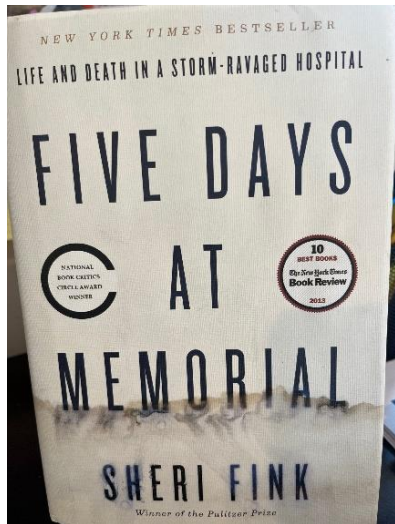


# Understanding the Emergency Power Landscape for Skilled Nursing Facilities; Deadly Incidents, Regulatory Requirements & Best Practices





# Today's Regulatory Landscape Reflects Deadly Lessons from Nursing Homes Impacted by Hurricane Katrina – August 29, 2005





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**The Washington Post**  
*Democracy Dies in Darkness*

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## At Nursing Home, Katrina Dealt First Blow

Nuns Labored for Days in Fatal Heat to Get Help for Patients

By Anne Hull and Doug Struck  
September 22, 2005 at 8:00 p.m. EDT

- **Chateau Living Center – Jefferson Parish - 13 deaths attributed to excessive heat following loss of power**
- **Lafon Nursing Home of the Holy Family – Lafon, LA - 19 residents died due to excessive heat following loss of power**



## **Proposed CMS Emergency Preparedness Rule Addresses Threat of High Temperatures**

- **New rule, proposed in December 2013, introduced new federal requirement to keep indoor temperatures below 81 degrees during power outages**
- **Final rule was published September 2016 and took effect November 16, 2016. Facilities had until November 15, 2017 to comply.**
- **If facility could not keep temperatures within required range, evacuation would be required**



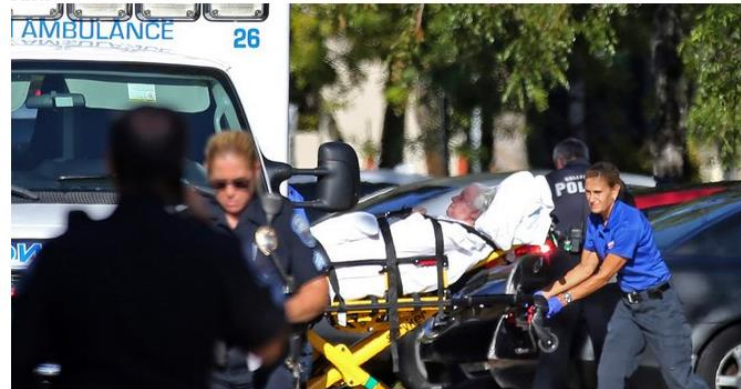
## September 10, 2017 – Hurricane Irma Strikes Florida; 12 Elderly Residents of Hollywood Hills Rehab Center Die Due to Excessive Heat

- **Emergency power was functioning in the days following landfall, however, air conditioning was not connected to emergency power (the new federal requirement had not yet taken effect)**

### *Florida Governor Imposes New Rules After Nursing Home Deaths*

By SHERI FINK and MATT STEVENS  
SEPT. 16, 2017

Photo







## Florida Governor Rick Scott Imposes New Rules



- **Within 60 days, nursing homes must acquire sufficient generator capacity, and fuel, to maintain indoor temperatures in patient care areas at 80 degrees or less for a period of no less than 96 hours**



## **Florida's Nursing Home Trade Association Fights New Rule**

- **New Law, enacted March 26, 2018, maintains 96-hour requirement to keep indoor air temperatures below 81 degrees but reduces onsite fuel requirement to 72 hours for larger SNFs and 48 hours for smaller SNFs**
- **Empowers Agency for Healthcare Administration (ACHA) to develop and implement regulations**



## **New Florida Generator Requirements for Nursing Homes Also Include Mandatory Response Protocols if Emergency Power Fails During an Outage**

- **Mandatory notification of ACHA's Office of Plans and Construction**
- **Arrange for a temporary replacement generator to be connected that can meet loads normally covered with a properly functioning emergency power system**

# **Public Safety Power Shutoffs (PSPS) Prompt California to Follow Florida with Strict Requirement for Air Conditioning Connectivity to Source of Emergency Power for SNFs**



- **Pre-emptive utility shutoffs to minimize risk of wildfires sparked by utility lines puts added pressure on emergency power systems in nursing homes**
- **Hospitals and nursing homes report failures of emergency power during PSPS events**

# California Legislature Enacts Assembly Bill 2511



- **Legislation, signed into law by Governor Gavin Newsom in September 2022, mandates connection of air conditioning to emergency power in all skilled nursing facilities**
- **Requires 96 hours of onsite fuel, or confirmed agreement with fuel supplier for emergency resupply**
- **California Association of Health Facilities (CAHF) unsuccessfully fought proposal**

## **New Law Went Into Effect January 1, 2024**



- **California Department of Healthcare Access and Information (HCAI) charged with implementing new law**
- **Very few SNFs have enough emergency power capacity to meet new requirement with expected compliance costs for all SNFs exceeding \$600 million +**
- **HSAG hosted a webinar on AB 2511 compliance on February 21, 2024 featuring officials from HCAI, the California Department of Public Health and CAHF's Jason Belden (See link in chat to recording of webinar)**

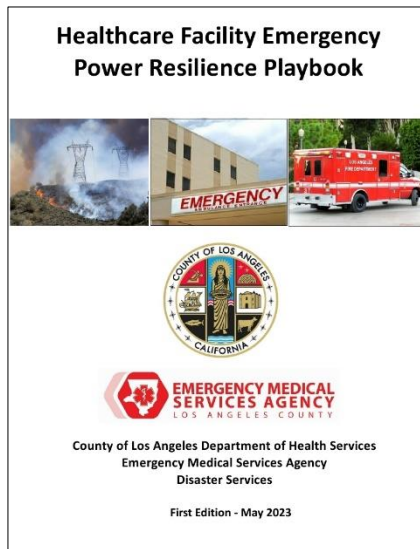


## **CAHF Education Campaign on AB 2511 in Development**

- **CAHF has hired Powered for Patients to help develop an education campaign to augment current CAHF resources on AB 2511 compliance**
- **Campaign will include:**
  - **Micro website**
  - **AB 2511 Compliance Buyer's Guide to help SNFs choose the right technologies, design professionals and emergency power equipment installation companies**



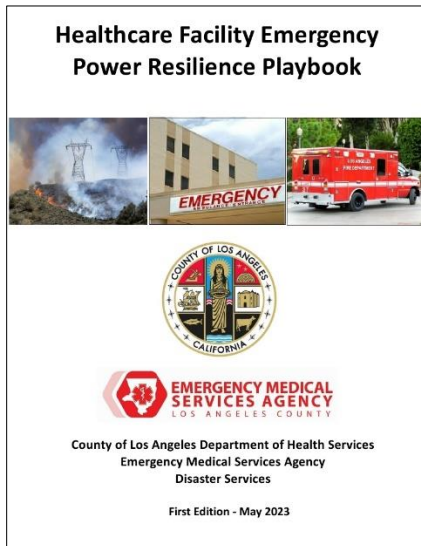
## Will Other States follow Florida and California's Lead?



- **For rest of country, CMS Emergency Preparedness Rule remains the law of the land for emergency power requirements in hospitals and nursing homes**
- **New Playbook from the Los Angeles County Emergency Medical Services Agency offers a valuable resource hospitals and SNFs can use to better safeguard emergency power**

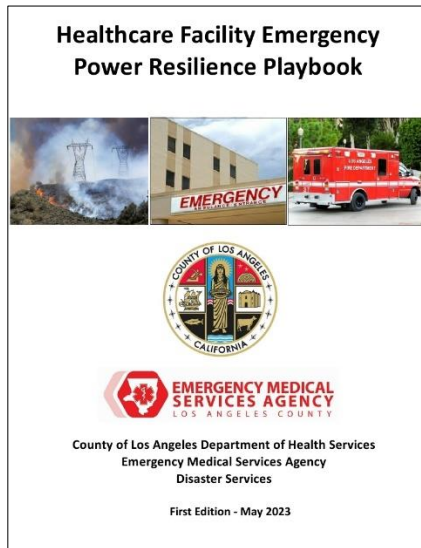


# Playbook is Culmination of LA County EMS Agency Emergency Power Resilience Initiative



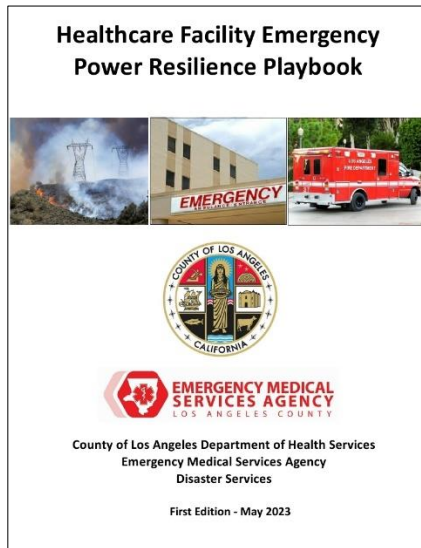
- **Multi-year initiative involved a review of existing protocols addressing emergency power threat response by hospitals and government agencies**
- **Census of emergency power systems in 78 Los Angeles County hospitals revealed seriously outdated generators, single generator facilities and hospitals with limited onsite fuel storage**
- **Findings led to new protocols introduced in recently published Healthcare Facility Emergency Power Resilience Playbook**

# New Protocols Arising from LA County Initiative Exceed CMS Emergency Power Requirements



- **Accelerated emergency power status reporting during power outages**
- **Vulnerability assessment for emergency power systems**
- **Internal review of emergency power system deficiencies**
- **First risk rating of hospital emergency power systems by a U.S. health agency**

# LA County Playbook is a Blueprint Other Jurisdictions Can Use to Bolster Emergency Power Resilience



- **Many Playbook Appendix elements are universally applicable and could be put to use today, including:**
- **Vulnerability assessment for emergency power systems**
- **FEMA Checklists for safeguarding emergency power before, during and after and outage**
- **Key Contacts & Spare Parts Inventory Checklists**



**CAHF is working with the LA County EMS Agency to leverage the Playbook by developing a plan to:**

- **Conduct a census of emergency power systems in LA County SNFs (mirroring recent hospital census)**
- **Propose adoption of hospital emergency power status reporting requirements for SNFs**
- **Implement a new protocol requiring SNFs to maintain a current census of life support patients during power outages**

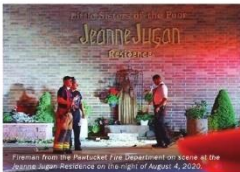
# Costly Lessons Learned from Rhode Island Nursing Home Following Power Outage



## Case Study: Generator Failure During Power Outage following Hurricane Isaias Underscores Heightened Risk to Patients in Single Generator Facilities

### Incident Highlights:

- Impacted Facility:** Jeanne Jugan Residence, 43-patient Skilled Nursing Facility in Pawtucket, RI
- Date of Incident:** August 4, 2020
- Cause of Power Outage:** Hurricane Isaias
- Emergency Power System:** Single, 42-year old, 300 kW generator
- Mode of Generator Failure:** Failed relay switch disabled cooling fan, triggering generator overheating and catastrophic failure
- Patient Impact:** Multiple elderly patients dependent on electric-powered oxygen concentrators and CPAP machines were transferred from facility during an emergency evacuation ordered by the Pawtucket Fire Department. No injuries occurred.



### Emergency Power Lessons Learned:

**Lesson #1:** Use of a generator well beyond its expected useful life puts a facility at serious risk as older generators lack modern features such as an automatic shutdown when the lack of sufficient coolant fluid is detected.

**Lesson #2:** Lack of knowledge about availability of replacement devices for electricity-dependent patients from the local fire department delayed a decision to shut down a dangerously overheating generator, leading to a catastrophic, unreparable and extremely costly generator failure.



- Outdated, single generator in Sisters of the Poor facility pushed beyond its limit during power outage due to concerns over oxygen patients
- Ignored warnings from fire chief to shutdown generator due to overheating leads to catastrophic failure
- Better planning for needs of oxygen patients could have avoided loss of generator



# Key Accounts

Michelle Burkeen



# Types of Power Shortage

- Planned
  - Routine Maintenance
  - Construction of new infrastructure
- Unplanned
  - Faults
  - Fire Mitigation
  - Capacity and Energy Emergencies
  - Disturbance Control Performance
  - To relieve or prevent a System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL).
  - To prevent voltage collapse



# Key Accounts and Mid Market

- Key Accounts
  - **Healthcare: Hospitals, Clinics, Medical Centers**
  - Data Centers
  - Government
  - Education
  - Manufacturing
  - Utilities
  - National Accounts
- Medical Monitored
- Mid market
  - Construction
  - **Health Care & Social Assistance: Assisted Living, Nursing homes, Shelter, Medical offices, Rehabilitation**
  - Finance & Insurance
  - Mining, Quarrying, Oil & Gas
  - Public Administration
  - Agriculture, Forestry, Fishing
  - Accommodation & Food Services
  - Wholesale Trade
  - General Business Chamber



# Medical Care Program

**If a customer has a life-threatening illness or use essential life-sustaining medical equipment that has a critical need for electricity, they may qualify to enroll in our Medical Care program. Customers will need to fill out the application, and have a physician sign it and send it in to APS.**

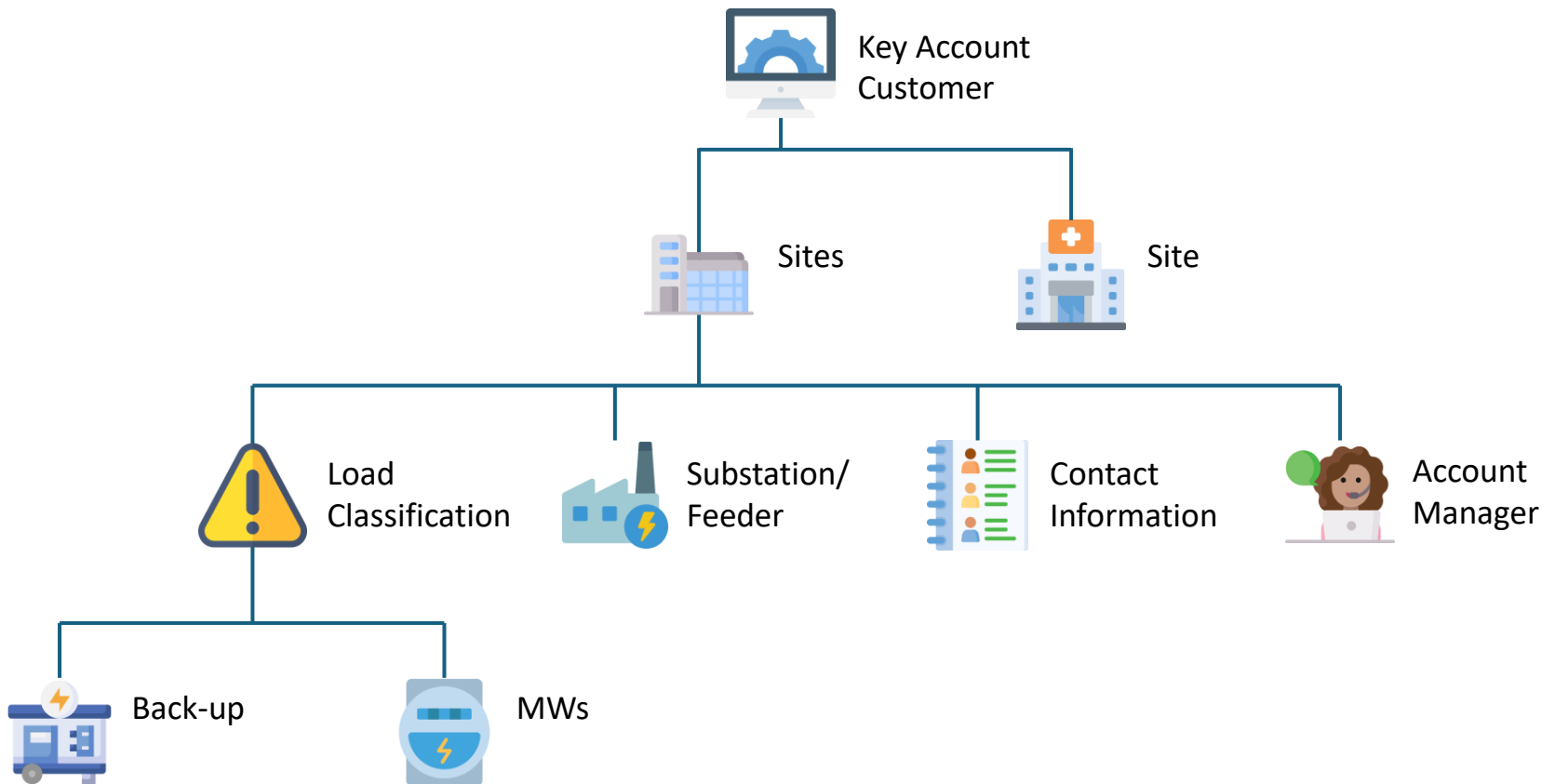
For planned outages, customers will receive notification by phone and/or door hanger 24 to 48 hours in advance when possible. They will need to reapply for this program every 12 months.

Customers will also receive a guide to prepare for planned outages.

Call 602-371-7171 to register for our [Medical Preparedness Program](#). This alerts us of your needs in the event of a disruption in service. For more safety tips you can use year-round, visit [aps.com/safety](https://aps.com/safety).

# Point of Contacts

- Roles
  - Facilities Manager, Electrical Supervisor, Lead electricians, Plant Operations Manager, Administrators, Maintenance Supervisors, and Corporate Consultants
- What information is needed?
  - Contact information
  - What information is needed from Utility?
  - Site access
  - Back up generation
  - Critical load size



# How does having a POC help?

- Real live updates in outage situations
- Notice before curtailment
- Support with generators
- Schedule planned outages
- Fire mitigation notice
- Summer/storm readiness
- Single point of contact other non outages issues

# Emergency Power Considerations and Temporary Solutions

# System Analysis

Facilities should undertake a vulnerability assessment of their standby power systems, to include:

- All system components and hazards likely to impact the facility.
- A detailed accounting of what electrical devices are and are not supplied by the backup power.
- The portions of the facility that will be supplied with standby power during a power interruption, as well as the portions that will not.
- A list of backup requirements from all licensing and accreditation agencies.
- A critical component—a clear understanding of fuel consumption rates while generators are on their rated load, and a conservative estimate of when refueling will be necessary.
- A load-shedding scheme in which less vital systems are powered down (load shed) to provide power to more critical systems.
- An advanced lifecycle analysis in which individual components are evaluated based upon life expectancy. In this manner, predicted replacement schemes can be developed.

# Loss of Utilities

- Identify extent of the outage and expected duration if possible (frequent checks of utility company website or app, phone call to utility, report outage immediately to utility company if not planned)
- <https://pgealerts.alerts.pge.com/>
- <https://www.sce.com/outage-center/check-outage-status>
- <https://www.sdge.com/residential/customer-service/outage-center/outage-map>
- Not the only utility companies in CA, find yours and put them into your communication and business continuity plan

# Loss of Utilities

- Maintain safe environment of care
- If outage is expected to last long enough that indoor temperatures cannot be controlled deploy temporary cooling/heating measures and/or temporary power
- Temporary cooling can be achieved with portable units provided **appropriate planning** has taken place
- Temporary generators can be deployed to support infrastructure provided **appropriate planning** has taken place
- Activate contracts or agreements with temporary equipment vendors
- Storage and costs of equipment are prohibitive but offer much greater resilience in large scale events
- Fire and Life Safety Equipment, including lighting needs to be maintained
- Evacuation is called for if a safe environment of care cannot be maintained



# Loss of Utilities

- Maintain resident care capabilities
- Pharmaceuticals are safely stored and dispensed
- Red plugs are available for medical equipment
- Account for all residents
- Comfort and assess residents for signs of distress
- Take all reasonable steps to protect food and water supplies
- Minimize impact on operations (Have down time procedures available for loss of EHR, HR/time keeping, admissions/discharges, etc.)
- Communicate the situation status to residents, staff, MHOAC, and CDPH District Office

# Loss of Utilities

- Call 9-1-1 if the power outage causes or threatens a medical emergency (e.g., power is lost to a ventilator).
- If the utility outage poses a risk to the safety of residents, staff or visitors, take actions to reduce/eliminate the threat without jeopardizing the safety of staff
- Activate facility's EOP and appoint a Facility Incident Commander (IC) if warranted.
- Notify appropriate state survey agency to report an unusual occurrence and activation of facility's EOP.

## Resources

<https://www.cahfdisasterprep.com/utilityfailure>

<https://www.cahfdisasterprep.com/powershutoff>

<https://www.cahfdisasterprep.com/mou>

[https://www.cahf.org/Portals/29/DisasterPreparedness/NHICS/UtilityFailureIRG\\_2017.pdf](https://www.cahf.org/Portals/29/DisasterPreparedness/NHICS/UtilityFailureIRG_2017.pdf)

<https://files.asprtracie.hhs.gov/documents/utility-failures-in-health-care-toolkit-summary.pdf>

<https://www.fema.gov/sites/default/files/2020-07/healthcare-facilities-and-power-outages.pdf>

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[www.cahfdisasterprep.com](http://www.cahfdisasterprep.com)

# Three Things to Do

- Download the Healthcare Facility Emergency Power Resilience Playbook, refer to Appendix.
- Customers using essential electric powered medical equipment should register with their utility company.
- Each center should sign-up with their utilities outage alert.

# Questions?





# Thank you!

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## CMS Disclaimer

Slides 1–3 and 34–37

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