

## Navigating Photovoltaic and Battery Energy Storage Projects through HCAI

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### INTRODUCTION

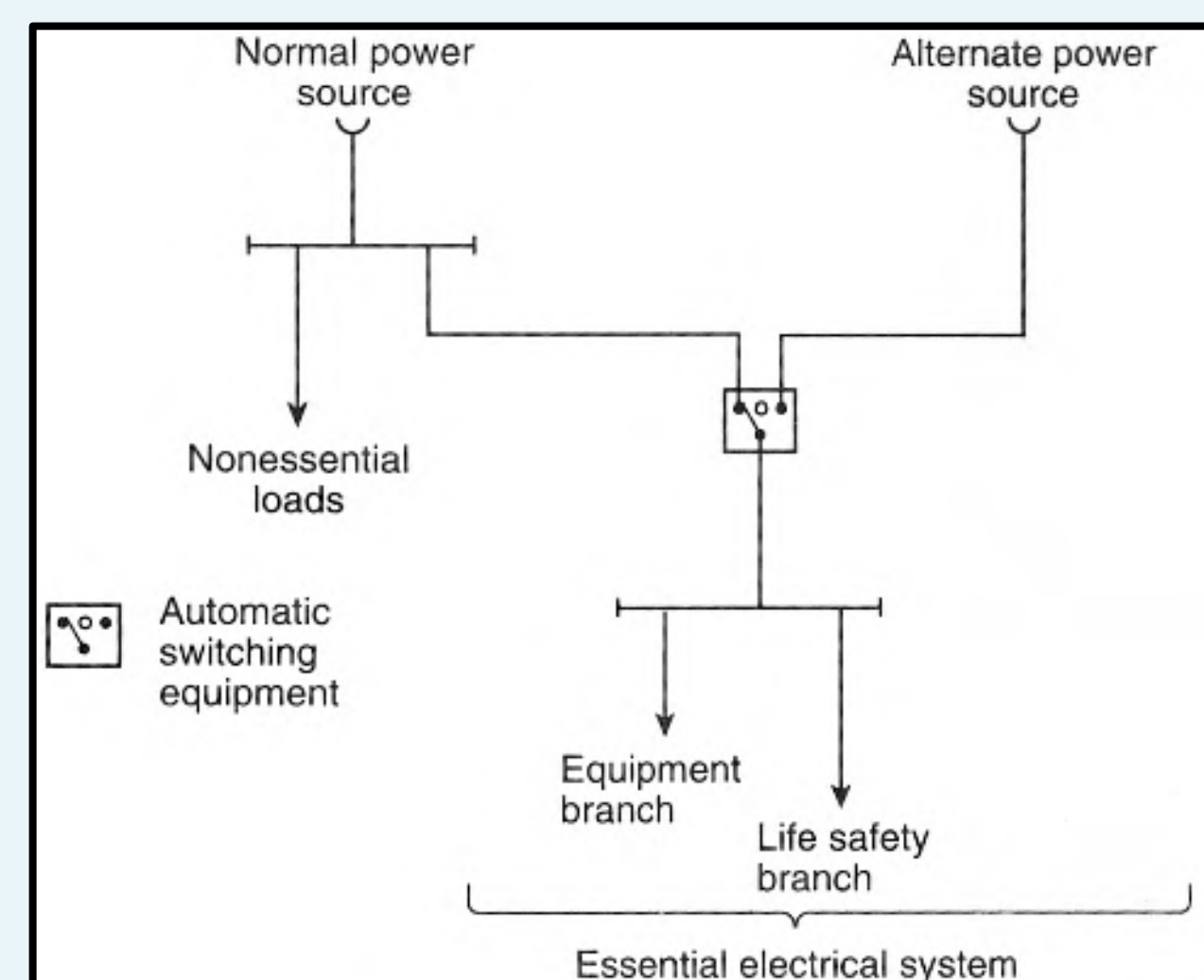
AB 2511 amended Health and Safety Code (HSC) Section 1418 and added Section 1418.22 that requires that skilled nursing facilities and OSHPD 2 type campuses have an alternative source of power to provide back up power for a minimum of 96 hours in the event of an outage. In this venue, distributed generation is discussed as an alternative source of power.

### OBJECTIVE

To illustrate an existing system of distributed generation that provides compliance with HSC §1418.22, which has been defined in Policy Intent Notice 74, and to act as a guide to help facilities ensure that they are in conformance with the law.

### METHOD

The parallel microgrid system will comply with Title 24, California Electrical Code, Part 3, Article 517.42 - Essential Electrical Systems for Nursing Homes and Limited Care Facilities.



As a potential solution, a new healthcare microgrid could be interconnected to the system with any combination of distributed generation sources. In this case, we will present photovoltaic power and energy storage system as a power source. Distributed energy generation can be configured to operate in parallel with a normal distribution switchboard at the facility

# Renewable Energy and Distributed Generation to provide back-up power for life-saving equipment and oxygen-generating devices.

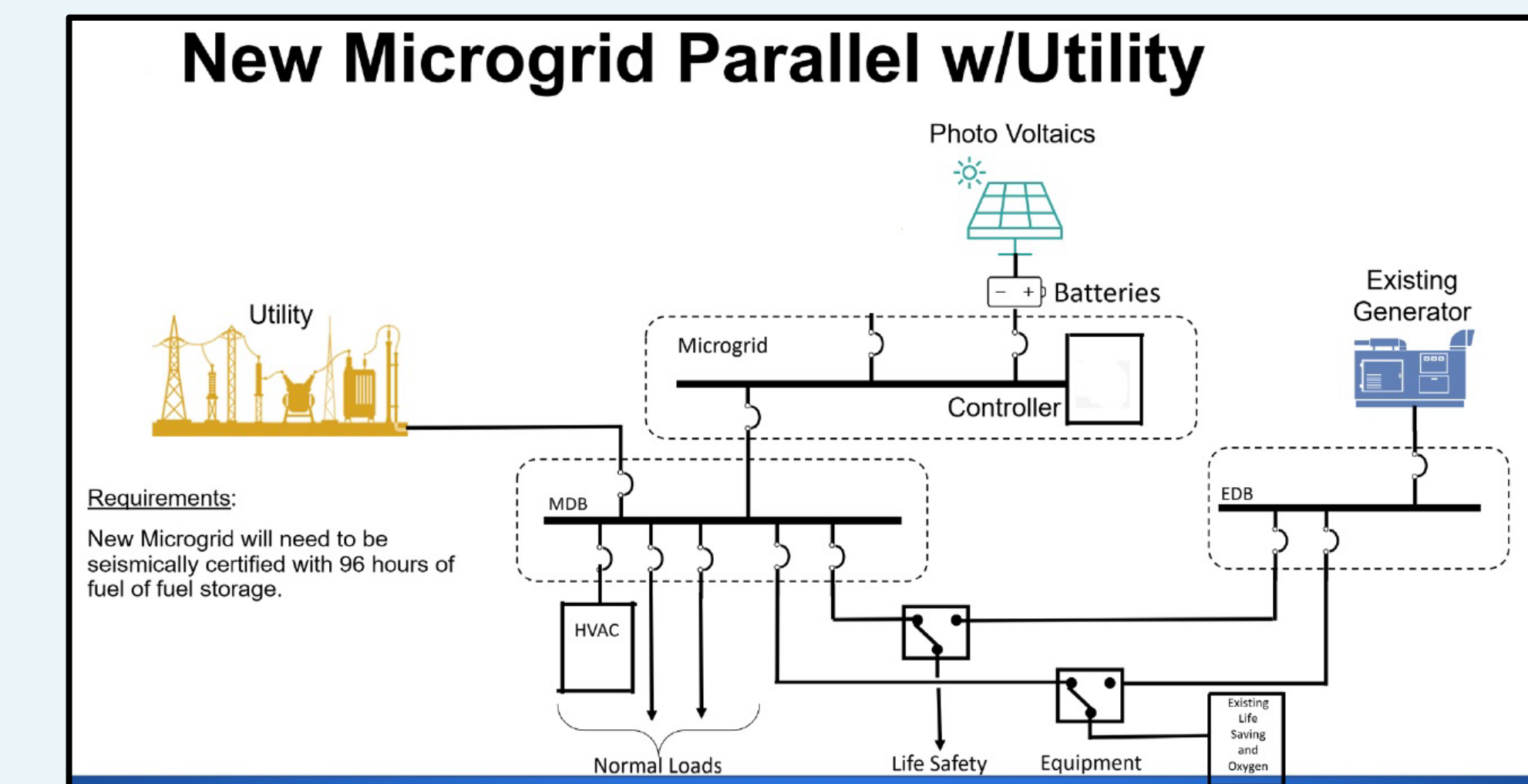
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### RESULTS

Under normal conditions the utility will be the main source of power with parallel feeds from the distributed energy microgrid. If there is an outage event and the utility source is no longer available, the microgrid controller will open the main breaker in the main switchgear “MDB” and manage the distributed energy sources with the batteries to provide a stable off-grid voltage at main switchgear within 10 seconds.

Once the utility source has returned the microgrid controller with the aid of relays senses the power to confirm the continuity of the utility power. If the utility power is stable, the main breaker is closed at the main switchgear and the microgrid begins to operate as noted under normal conditions. 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. The loads backed up will be assigned under the critical loads panel and can include equipment such as cooling equipment, life-saving equipment, and oxygen-generating devices.



### DISCUSSION

HCAI has one of the most extensive review processes in the state of California. The development of a microgrid parallel to the utility provides a viable project solution in the solar plus storage space that has received HCAI approval and comply with HSC §1418.22. The purpose of this research is to arm developers and installers with the tools to receive approval from HCAI for solar plus storage projects and aid the proliferation of these projects across the State of California.

