CAL POLY
Environmental Health & Safety
ADMINISTRATION & FINANCE

Emergency Generators

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PURPOSE

This policy establishes guidelines for the installation of new emergency generators on the Cal Poly campus. Its purpose is to minimize the operational and environmental impact of these generators and align with the university's sustainability goals, while still providing necessary emergency backup power for life safety systems and critical infrastructure and/or operations.

BACKGROUND

Emergency generators are powered by fossil fuels and produce emissions that contribute to air pollution and climate change. While new generators meet stringent EPA standards when installed, they can become legacy polluters over their 20+ year lifespans. As clean power generation and storage technologies continue to advance, these generators will become more tightly regulated, increasingly obsolete, and contribute to unnecessary emissions. Cal Poly is committed to reducing its carbon footprint through clean energy adoption.

Additionally, the proliferation of emergency generators for non-essential purposes places an undue burden on campus resources. Each generator installation, regardless of its criticality, requires ongoing maintenance, testing, and compliance monitoring. These activities consume significant staff time, operational budget, and specialized expertise. When generators are installed for non-critical needs, they divert valuable resources from truly essential systems. The campus must allocate manhours for regular inspections, load testing, fuel management, and meticulous record-keeping for each unit, even those supporting less crucial functions. By limiting generator installations to only those supporting critical needs, we can ensure that our maintenance efforts and resources are focused on systems vital to campus safety, essential operations, and mandated requirements, thereby optimizing our emergency preparedness and resource allocation.

WHO DOES THIS PROGRAM APPLY TO?

- Facilities Planning ana Capital Projects
- ASI
- Cal Poly Partners
- Student Housing
- Transportation and Parking

WHAT ARE THE KEY REQUIREMENTS OF THIS PROGRAM?

Installation of new permanent emergency generators shall be limited to only where specifically required for fire/life safety system backup or critical operations that lack alternative backup power options.

For new construction and major renovations, the minimum required emergency backup power should be provided via battery storage or UPS systems where feasible. The use of portable generators should be limited and pre-approved by Facility Operations.

When stationary emergency generators are determined to be required for new installations, natural gas fueled emergency generators are preferred over diesel units.
While factors such as infrastructure constraints, fuel availability, and location requirements may necessitate the consideration of diesel-powered units, approval is granted on a case-by-case basis, and only when a documented and specific need is established where no other practical alternatives exist.
All new buildings shall be designed with electrical infrastructure that enables future connection to renewable energy sources and storage systems once available.

OPERATIONS & MAINTENANCE
Existing emergency generators required for life safety shall follow strict preventative maintenance and emissions testing schedules per State, Federal and Regional regulations.

Generators shall only be operated for periodic testing and during actual emergency outage events when utility power is lost. No generators shall be used for peak shaving or supplemental/temporary power purposes which can be accommodated by utility power.

Mobile Generators are used only by Facility Operations to power critical infrastructure during a power outage, transformer failure or local distribution equipment failures.

REPLACEMENTS & UPGRADES
When emergency generators reach the end of their useful life, replacements shall be evaluated against this policy and if approved utilize the lowest emission, cleanest fuel technology available that meets code requirements. Opportunities to transition to battery backup, fuel cells, or other clean energy backup sources shall be fully evaluated as part of any replacement project.

New clean energy sources like solar and battery storage implemented during utility upgrades should allow for future elimination of generators for backup power needs.

This policy allows Cal Poly to be a leader in sustainable energy practices while still maintaining essential backup power capacities required for life safety. It also provides a responsible transition plan towards fully renewable backup power systems over time.

The Environmental Health & Safety Department must be involved in the planning process for all emergency generator installations, regardless of size or fuel type, to ensure compliance with regulations and minimize environmental impacts.

ADDITIONAL INFORMATION AND RESOURCES

- https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera
- https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health
- https://afd.calpoly.edu/sustainability/campus-action/climate-resilience/

DEFINITIONS

Critical Infrastructure and Operations: Refers to the essential systems, assets, networks, and equipment required to maintain campus safety, security, and core functions, especially during emergencies or power outages. This encompasses facilities, services, and operations whose continuous functioning is vital to ensure public health, safety, and the overall well-being of the campus community. It includes emergency response systems, water supply and treatment facilities, sewer lift stations, key communication networks, and equipment necessary to prevent significant impacts on the campus

community. Additionally, it covers systems required to maintain compliance with local, state, or federal permit limits, as well as operations critical to preserving campus reputation and managing enterprise risk.

Emergency Power: An alternate source of electrical power that activates automatically and provides electricity to designated critical systems, equipment, and areas when the normal power supply is interrupted. This backup power system is designed to maintain essential functions, ensure life safety, and support critical operations. **Emergency Shelter-in-Place Areas:** Designated spaces on campus specifically identified and prepared to provide temporary refuge for students during emergencies that require sheltering in place. These areas are included in the definition of **critical campus infrastructure**.

Essential Research Activities: Scientific investigations, experiments, or ongoing studies that meet one or more of the following criteria: (1) Involve time-sensitive processes, living organisms, or perishable materials that would be irreparably damaged or lost if interrupted. (2) Require continuous operation of specialized equipment or environmental controls to maintain data integrity or experimental conditions. (3) Are part of long-term studies where interruption would significantly compromise years of work or invaluable data sets. (4) Are funded by grants with strict contractual obligations or deadlines that cannot be extended, or grants whose funding is expressly contingent on power interruption protection.

Need Based on Fire Life Safety and Code Requirements: This refers to systems, equipment, and areas that require emergency power as mandated by applicable building codes, fire safety regulations, and life safety standards. It encompasses emergency egress lighting and exit signs, fire alarm and detection systems, fire suppression systems (including fire pumps), smoke control and stairwell pressurization systems, emergency voice/alarm communication systems, elevators designated for emergency responder use, automatic door release mechanisms for fire doors, critical ventilation systems in hazardous areas, emergency command center equipment, and any other systems or equipment specifically required by local, state, or federal codes to have emergency power for life safety purposes. This need is determined by adherence to the California Building Code, California Fire Code, NFPA standards, and any other applicable regulations governing higher education facilities.