City of Sonoma

Planning Department
No. 1 The Plaza
Sonoma, CA 95476

Generator Requirements (Optional Stand by Systems) Revised 5/6/21

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Purpose: This handout summarizes the regulations and requirements for backup generators installed within the City of Sonoma.

General Requirements:

- The noise level produced by generators shall not exceed the levels prescribed in Tables 1 or 2 (below) based on the zone or location of the installation and the use of the generator as specified in Sonoma Municipal Code (SMC) Chapter 9.56 (Noise)
- Fuel supply, storage and fueling requirements shall comply with the California Fire Code or other Fire Department requirements based on the occupancy type.
- Generators shall be installed in accordance with NFPA 37, articles 702 and 705 of the California Electrical Code, and the manufacturers installation requirements.
- A Bay Area Air Quality Air Management District (BAAQMD) permit is required for generators larger than 50 brake horsepower (bhp). Go to https://www.baaqmd.gov/permits/apply-for-a-permit/engine-permits/psps for more information on BAAQMD generator permits.

Location Requirements

Generators (including enclosure) may be located in the side or rear yard setback if the equipment:

- Is not closer than three feet to any side or rear property line; and
- The equipment does not exceed a height of four feet measured from the finished grade at the base of the unit (SMC 19.40.110 Setback regulations and exceptions).
- Generators are subject to the following additional location requirements:

Item Description	Setback Required	Code Citation
Within Front (street facing) Yard	Not Allowed	SMC 19.40.110
Side or Rear Property Line (provided that the top of the equipment does not exceed a height of 4 feet from grade)	3 feet min.	SMC 19.40.110
Openable windows and doors serving occupied spaces	5 feet min.	NFPA 37 Section 4.1.4.1
Combustible Unrated Walls (including fences)	5 feet min.	NFPA 37 Section 4.1.4.1
1-Hour Rated Walls	Manufacturer's Installation Requirements	NFPA 37 Section 4.1.4.1.1
Outdoor air intakes for mechanical ventilation systems	25 feet min.	CMC 407.2.1

Building Permit Submittal Requirements:

- Plan submittal shall include the following:
  - Dimensioned site plan showing all buildings, fuel supply lines, proposed generator and transfer switch locations, exhaust termination location, proximity of generator to building openings (windows and doors);
  - Single line electrical diagram;

- Show and specify all new and existing all electrical, receptacles, panels, conductors, devices, services and electrical equipment. Specify size of electrical service and new panelboards. Indicate which items are new (N) and which items are Existing (E).
- Manufacturer's specification sheets for the generator and transfer switch which includes rated noise decibel level (in dBA), engine brake horsepower (bhp), fuel tanks, fuel supply, etc.;
- Size, type, location and specifications for generator screening, physical protection, noise mitigation enclosures, etc.

- Copy of BAAQMD permit if generator is larger than 50 brake horsepower (bhp).

Noise Requirements:

- The property owner or contractor must submit a report or equivalent documentation to show that the equipment meets allowable sound levels. General use generators must comply with noise standards contained in SMC Section 9.56.040 (General Noise Limits) as measured at the closest property line (See Table 1 below).
- During an electrical power outage or during testing of backup emergency generators, backup emergency generators may exceed the general noise limits prescribed in Section 9.56.040 by not more than 5 dBA (See Table 2 below). Backup emergency generators permanently or temporarily connected to an electrical panel, electrical switchgear or building wiring by other than a plug and cord connection, shall not be operated unless lawfully installed and approved with a City building permit.

Table 1 – General Noise Limits

Property Type or Zone	Daytime Limits	Nighttime Limits
Residential	60 dBA Intermittent 50 dBA Constant	50 dBA Intermittent 40 dBA Constant
Commercial/Mixed Use	65 dBA Intermittent 55 dBA Constant	65 dBA Intermittent 55 dBA Constant
Public Property	Most restrictive noise limit applicable to adjoining private property	

Table 2 – Noise Limits for Generators During an Electrical Power Outage or During Testing of Backup Emergency Generators

Property Type or Zone	Daytime Limits	Nighttime Limits
Residential	65 dBA Intermittent 55 dBA Constant	55 dBA Intermittent 45 dBA Constant
Commercial/Mixed Use	70 dBA Intermittent 60 dBA Constant	70 dBA Intermittent 60 dBA Constant
Public Property	Most restrictive noise limit applicable to adjoining private property plus 5dBA.	

Generator Enclosures.

- Enclosures for generators designed to be used while the generator operates, such as Zombie boxes, other manufactured enclosures or custom-built enclosures are not allowed unless specifically approved in writing by the generator manufacturer and listed as part of the generator assembly in accordance with UL 2200, UL UL Guide FTSR or UL Guide FTPP (Engine Generator Enclosures - Construction Only), for use with the proposed generator.
- Walls, fences, sound attenuation panels and other screens or barriers may be installed around generators provided that a horizontal clearance of not less than 5 feet is provided from the generator. Generators installed in enclosed rooms shall comply with the manufacturer's installation requirements, the California Fire Code and NFPA 37 for installation indoors.

Requirements for Roof Installations: Mechanical equipment may be installed on the roof when the following conditions are met:

- Engineered plans are submitted and approved for the construction of the screening and adequacy of the roof support and equipment anchorage.
- Screens and anchorage shall be designed for all California requirements for structural design including wind and seismic loads.
- Adequacy of the roof support and equipment anchorage shall consider the vertical and lateral load capacities of the proposed building (SMC Article VIII) and California Building Code, latest edition. Generator slab or footing supports must be designed to resist all vertical and lateral loads.

Screening and Buffering: Generators must be screened from public view, in compliance with SMC 19.40.100 (Screening and Buffering):

- Screened from Public View. Roof- or ground-mounted mechanical equipment (e.g., air conditioning, heating, ventilation ducts and exhaust, water heaters, etc.), loading docks, service yards, storage and waste areas, and utility services shall be screened from public view from adjoining public rights-of-way, and adjoining area(s) zoned for residential or open space uses, including views from above the subject project.
- Architectural Compatibility. The method of screening shall be architecturally compatible with other on-site development in terms of colors, materials, architectural style, and shall include appropriately installed and maintained landscaping subject to SMC 19.40.060, Landscape standards, and the approval of the city planner or the design review and historic preservation commission, as applicable.

Planning Approval: Generators may require a Use Permit (SMC 19.54.040 Use Permits) or Design Review approval depending on the size, location, zoning district, and property specific characteristics.

Use Permit: A Use Permit requires a public hearing before the City of Sonoma Planning Commission and requires a Use Permit application, fees, detailed project plans, elevations, and a narrative. A Use Permit may be required when a generator would:

- Modify a previously approved parking plan, landscaping plan, or require other alterations to an existing Use Permit.
- Not meet the criteria outlined above for setbacks, noise, screening, or other operational characteristics.

Design Review: Design review requires a public hearing before the Design Review and Historic Preservation Commission (DRHPC) and requires a Design Review application, fees, detailed site plan, elevations, and a narrative. Design Review may be required when a generator would:

- Alter an approved Design Review or Landscape Plan
- Include screening that triggers Design Review
- Exterior modifications to a commercial or mixed use building that require a building permit.
- Be located in the public view at a commercial or mixed use property.

Portable generator safety:

- Be sure that the power needs of the device (electric load) is supported by your generator and does not exceed the manufacturer's specifications.
- Place the generator where its exhaust can vent safely to prevent carbon monoxide poisoning and death.
- Only use extension cords that are properly sized for your generator to prevent overheating.
- Keep cords out of high-traffic areas so they don't present a tripping hazard.
- Never bury cords or place cords under rugs where heat can be generated or where damage to a cord may go unnoticed.

Permanent-standby generator safety:

- Installation requires a licensed electric contractor or other qualified professional.
- Ensure electricity from your generator does not flow or "backfeed" into PG&E's power lines. The most common way to prevent backfeeding is to install a "double-pole, double-throw transfer switch" along with your permanent standby generator.
- Any additions or alterations to your house wiring must be permitted and inspected by the building department.
- Once installation is complete, call PG&E at 1-800-743-5000 to let us know about your backup system. PG&E line workers will then be aware of your generator when working on an outage in your area.