

City of Grass Valley Building Department Nevada County Building Department

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### "Partnering to Improve Consistency & Customer Service"

## **GENERATOR PLAN SUBMITTAL CHECKLIST**

#### THE FOLLOWING ITEMS ARE REQUIRED FOR A COMPLETE PLAN SUBMITTAL. <u>PLEASE READ CAREFULLY!</u> THIS COMPLETED FORM MUST ACCOMPANY GENERATOR PLAN SUBMITTALS <u>CLICK HERE</u> TO APPLY FOR PERMIT & SUBMIT PLANS. INCOMPLETE SUBMITTALS WILL NOT BE ACCEPTED.

#### JOB ADDRESS:

APN:

SITE PLANS AND COMPLETE PLAN SETS ARE REQUIRED. Plans must be legible and drawn to scale in blue or black ink on clear unlined paper. Minimum Size is 11" x 17", Maximum Size is 24" X 36". The Scope of Work must be fully stated and detailed on the plans. Plans should be prepared with lettering of sufficient contrast to be readable when scanning. Photocopies or prints may be submitted.
<ul> <li>SITE PLAN/COVER SHEET (<u>Click Here for Example</u>):</li> <li><u>Owner's Name &amp; Contact Info.</u>   <u>Site Address</u>   <u>Assessor's Parcel Number (APN)</u>   <u>North Arrow</u>   <u>Sheet Index</u>   <u>Statement of ComplianceACA OodesDCPlan Preparers Name, Address &amp; Signature</u>   <u>Project Scope of Work</u></li> <li>Identify all existing structures and proposed generator equipment (include Transfer Switch, Disconnects, Etc.)</li> <li>Location of wells, water storage tanks, bodies of water and 100 yr floodplains. Include a setback from the generator (minimum 100 ft)</li> <li>Location and types (above ground or underground) of electrical and gas utilities</li> <li>Identify any easements (PG&amp;E, water, road, driveway, etc.)</li> <li>Setbacks from the generator to buildings, property lines, water sources and septic/leach lines/pumps</li> <li>Location, size, and setbacks to propane tanks from the generator, property lines and structures. Indicate if new or existing.</li> <li>All underground tanks require review &amp; approval from the Grass Valley Fire Department.</li> </ul>
<ul> <li>ELECTRICAL SINGLE LINE DIAGRAM:</li> <li>Amperage size and location of the main electrical panels and subpanels (Minimum 3 ft from gas meter)</li> <li>Grounding/bonding conductor sizes/types for structure (main ground, water bonding, gas bonding, etc)</li> <li>Equipment grounding conductor size, type and location for circuits and module/rack grounding</li> <li>Complete <u>NEC Load Electrical Load Calculations</u></li> <li>Disconnect types, sizes and locations (disconnect required within 3' of MSP)</li> <li>Conduit sizes, types &amp; distance from the generator to junction box locations, the transfer switch &amp; power source</li> <li>Transfer switch type, size and location</li> <li>Conductor wiring types and sizes, system and generator</li> </ul>
<ul> <li>SIGNAGE:</li> <li>Required signage for panels, disconnects, transfer switches, etc pursuant to California Electrical Code Article 702.7</li> <li>Permanent labels with red background and white lettering, lettering minimum 3/8" in height, and resistant to fading pursuant to CA Electrical Code Article 702.7</li> </ul>
<ul> <li>EQUIPMENT/PAD ANCHORING SPECIFICATIONS:</li> <li>Provide cut sheets for all generator equipment and transfer switches.</li> <li>Generator slab type, thickness, and anchoring information</li> </ul>
<ul> <li>GAS LINES (PG&amp;E Gas Service):</li> <li>Show underground and aboveground gas line locations, materials and sizes</li> <li>Provide gas line sizing calculations including all equipment and appliances served by the gas source in accordance with the California Plumbing Code</li> </ul>

SPECIFIC REQUIREMENTS OR DOCUMENTS MAY DIFFER BASED UPON YOUR SPECIFIC APPLICATION AND THE BUILDING CODE

#### NEC Standard Electrical Load Calculation for Single Family Dwellings

(Only for Service Ratings of 120/240V, 225 Amps Max)

Owner: \_\_\_\_\_ Location: \_\_\_\_\_

Total Floor Area of Dwelling (NEC 220.12) \_\_\_\_\_ SQFT.

Factor		uantit	y	Volt Amperes (VA)					
"General Lighting"									
1. General Lighting (SQFT X 3 VA/SQ FT (Table 220.12)	3 X		sqft.						
2. Small Appliance Circuits (1500 VA per circuit) (NEC 220.52(A)) (minimum 2)	1500 X								
3. Laundry Circuit (1500 VA per circuit) (NEC 220.52(B))	1500 X								
4. Total General Lighting Load (Add lines 1, 2 & 3):									
5. First 3000 VA @ 100%:				3000					
6. Total General Lighting Load – 3000 = @ 3									
7. Net General Lighting Load (Per NEC 220.42) (Add line									
*Fixed Appliances(if insufficient space, use back):		YES	NO						
Garbage Disposal									
Bathroom Fan									
Microwave									
• Dishwasher									
Other:									
Other:									
			Total						
8. 3 or less Appliances, Total Appliance VA;									
4 or more Appliances, 75% of Total Appliance VA (NEC	220.53)	:							
				Name alsta Datina					
*Other Loads (including motors, EV charger(s), etc.)		YES	NO	(VA)					
9. Electric Range (8000VA or Nameplate)**									
10. HVAC									
11. Electric Oven									
12. Electric Dryer (5000 VA minimum)**									
13. Electric Vehicle Charger									
14. Other:									
15. Other:									
16. 25% of largest motor (NEC 430.24)									
Total Service Load Volt-Amneres (VA) (Add lines 7 8 & 9	thru 16	9 -							
Total Service Load Volt-Amperes / 240-volts = Amperes									
	Peres								
***Service Rating (Amperes)=									

\*\*\*Service Rating (Amperes)=
\* For every "YES" answer, indicate VA rating of equipment

\*\* Nameplate rating must be used if larger oven combination. For cook-top use 3600VA

\*\*\* Service Rating shall be greater than or equal to the Service load

Note: If load management modules are used for all 240 volt loads a load calculation is not required.

# **Detail Attachments**



See Figure 2-20 and Note 3 on Page 2-33

Figure 2-19

#### Electric and Gas Meter Set Separation Dimensions and Clearances

Notes in reference to Figure 2-19.

- 1. Electric meter panel locations are subject to utility approval and must comply with the applicable code requirements. PG&E does **not** have specific requirements for the distance from the electric panel to the outside building corner. See Section 5, "Electric Metering: General," for properly locating the electric meters. See Subsection 5.4.4., "Working Space," on Page 5-12, for electric meter working space.
- 2. Applicants must not install any electrical devices or equipment, including wires, cables, metering enclosures, telecommunication enclosures, bond wires, clamps, or ground rods within the shaded area around the gas meter. The 36-inch distance can be reduced to 18 inches for electrical devices or equipment certified for NEC Class I, Division 2 locations.
- 3. Place the gas service riser 6 inches to 9 inches from the finished wall. The completed customer houseline at the service delivery point must extend a minimum of 4 to 6 inches from the finished wall where the meter is to be set, and must be 26 inches above the finished grade. See Figure 2-14 on Page 2-27, Figure 2-15 on Page 2-28, and Subsection 2.5. on Page 2-43.

Table 2-1 Minimum Separation and Clearance Requirements for Trenches <sup>1</sup>											
		G	Duct T	DB T	С	S	Р	SL			
		(In Inches)									
G	Gas <sup>2</sup>	_	12	12	12	6	12	6			
Т	Telephone (Duct)	12	-	1	1	12	12	12			
Т	Telephone (Direct Bury)	12	1	_	1	12	12	12			
С	CATV	12	1	1	_	12	12	12			
S	Electric Secondary	6	12	12	12	1.5	3	1.5			
Р	Electric Primary	12	12	12	12	3	3	3			
SL	Streetlight <sup>3</sup>	6	12	12	12	1.5	3	1.5			
NE	Foreign Electric Sources, Non-PG&E <sup>4</sup>	12	12	12	12	12	12	12			

<sup>1</sup> All separation clearance distances are in inches.

<sup>2</sup> For more information about this table, see <u>PG&E Bulletin TD-5453B-002</u>, "Updated Separation Requirements For Conduit in Joint Trench," located in <u>Appendix B</u>.

<sup>3</sup> Streetlight circuits not owned by PG&E must be installed to meet the requirements in PG&E's <u>Joint Trench</u> <u>Configurations & Occupancy Guide</u>. Specifically, applicants must review the requirements for working with a second utility company.

<sup>4</sup> Considered a "utility" as defined in <u>PG&E Standard S5453</u>, "Joint Trench."