All plans submitted must comply with and reference, the 2019 California Building Standards Code that became effective on January 1, 2020, including the 2019 California Residential Code (CRC), 2019 California Electric Code (CEC), 2019 California Plumbing Code (CPC), and 2019 California Mechanical Code (CMC) as appropriate including any amendments and/or errata.

The City of Menifee Building and Safety Department has a plan check wait time of up to 7 business days for residential generators.

The City of Menifee does not currently perform any over-the-counter plan reviews due to staffing levels.

Requirements for Permit Submittal

Before approval and issuance of permit(s), the applicant shall submit to solar@cityofmenifee.us, an electronic set of plans (minimum size 11"x17"), which are drawn to scale (or at the very minimum are fully dimensioned), readable, and legible with a minimum of #12 font for text.

All plans shall include the following information:

(Plan information listed in the items below could be combined if clarity is maintained.)

1. **Cover Sheet** showing the following information: (a) project address; (b) owner's name, address, and phone number; (c) name, address, and phone number of the person preparing the plans; (d) scope of work statement; (e) number of stories and number of dwelling units; (f) sheet index indicating each sheet title and number; (g) legend for symbols, abbreviations, and notations used in the drawings.

   Generators shall be CARB compliant. Generators installed that are over 50 horsepower shall be certified by AQMD.

2. **Schematic Site Plan** showing the following information: (a) The building footprint with locations of property lines; (b) distances of building walls to property lines; (c) location and setbacks of the standby generator system(s) to buildings; septic/leach lines and property lines (Generators require a 5' setback from all building openings per NFPA 37); (d) lo cation of main service panels, sub panels, junction boxes, disconnects, or any associated electrical equipment with working space clearances; (e) and locations of other structures (if any) on the property and all fences, walls, and gates; (f) Location, size, and status (new or existing) of propane tanks (Indicate distance from generator to propane tank and from the propane tank to the residence and property line).

3. **Electrical Single Line Diagram** to include Load calculation demonstrating the back-up power does not exceed the capacity of the generator; Conductor wiring types / sizes and conduit / raceway types / sizes; Generator size, brand, model, and output; Transfer switch brand, model, type, and location. Manual transfer equipment shall have adequate capacity to supply all the equipment intended to be used at one time.

   Clearly indicate on the plans if the generator system is a separately derived system or a non-separately derived system.

   Automatic transfer switch (ATS)t shall be capable of supplying the full load that is transferred, or the system shall be designed with load management per CEC 702.4

Identify if PV solar is present in the electrical system. If yes, the electrical diagram shall detail the wiring and interconnection of the PV system with the standby generator system.

Generators shall have provisions to shut down the prime mover (engine, motor) per CEC 445.18. Prime mover shutdown on systems over 15 KW shall be externally operable. The means of disconnect shall comply with the following:

(1) Be equipped with provisions to disable all prime mover start control circuits to render the prime mover incapable of starting.
(2) Initiate a shutdown mechanism that requires a mechanical reset.

Generator systems shall have (1) or more disconnecting means. An additional disconnecting means is required unless the following conditions are met:

- A readily accessible disconnect lockable in the open position and located within site and 50' of the building served per CEC 445.18, 110.25

4. **Fuel Gas piping** isometric plans and gas pipe sizing calculations shall be provided on the plans along with gas pipe size, type, depth, length, and all equipment/appliances served by the gas piping material. The gas piping shall be sized to the BTU rating of the generator. CPC 1208.4, 1208.4.2

5. **Manufacturer's Specification Sheets** with make, model, listing, size, and weight for all components including, but not limited to, transfer switches, sub-panels, junction boxes, disconnects, panel boards. Provide a complete copy of the standby generator installation manual as well as the specifications for the grounding method to be used. Grounding method used must comply with installation manual requirements.

   Equipment Pad: Provide concrete slab thickness and attachment to generator, or prefabricated pad per ASCE-7.

6. **Placard Requirements**
   a. This sign is required for all installations - A permanent directory sign shall be installed at the main switch gear/service indicating the type and location of the on-site generator on the property. CEC 702.07(A), 705.10, 110.21(B)

   b. This sign is required on non-separately derived systems - Where removal of a grounding or bonding connection in normal power source equipment interrupts the grounding electrode conductor connection to the alternate power source(s) grounded conductor, a warning sign per CEC702.7(B) shall be installed at the normal power source equipment stating:

WARNING
SHOCK HAZARD EXISTS IF GROUNDING
ELECTRODE CONDUCTOR OR BONDING JUMPER
CONNECTION IN THIS EQUIPMENT IS REMOVED
WHILE ALTERNATE SOURCE(S) IS ENERGIZED.

   c. All signage shall be made of a material that is suitable for the environment where they are installed. CEC 110.21(A)(1), 110.21(B)(3)

d. All signage shall be permanently attached to the equipment (no rivets or screws are allowed) CEC 110.21(B)(2)

e. Information on the required signage shall not be handwritten. CEC 110.21(B)(3)

7. **Inspection Requirements and Checklist**

a) An inspection shall be requested to verify the gas/propane piping underground prior to covering. The gas piping burial depth shall be in accordance with CPC 1210.1.1

b) A gas piping air test shall be performed with a minimum of 10lbs. psi for 15 minutes. The test gauge shall be installed, and the gas piping shall be pressurized prior to the inspection. CPC 1213.3

c) Verify the natural gas/propane connector is sized for the BTU rating of the generator.

d) An inspection shall be requested to verify the electrical conduit underground prior to covering. The conduit burial depth shall be in accordance with CEC Table 300.5

e) Verify that a grounding electrode and a grounding electrode conductor is installed for the existing service equipment CEC 250.50

f) Verify that bonding is installed from the main service equipment to any metal gas piping in the residence.

g) Verify that bonding is installed from the main service equipment to any metal water piping system. (PEX piping or other plastic water piping shall not be bonded)

h) When the neutral has been broken at the transfer switch (4-pole ATS), bond grounded conductors and the equipment grounding conductors (neutrals and grounds) at the generator. Separately derived systems must be grounded per CEC 250.30. (If the grounded conductor is not broken at the transfer switch (3-Pole), it is not a separately derived system.)

i) Provide the manufacturer's installation instructions at the time of inspection to verify that the generator was installed according to the manufacturer's installation instructions. CRC R106.1.2

j) Verify the equipment is anchored per plans or anchored per the manufacturer's installation instructions. R104.2 EXP., CEC 110.3(B)

k) Verify working clearances: 36" in depth, 30" in width, and 6'-6" in height. CEC 110.26

l) When the generator disconnect is not within site, disconnects shall be provided at each structure at the location the conductors enter the building. CEC 230.70(A)(1)

m) A readily accessible disconnect lockable in the open position and located within site and 50' of the building served per CEC 445.18, 110.25

n) Verify the flexible conduit lengths required at the generator per the manufacturer. CRC R104.2 EXP.

o) Verify placard requirements per the approved plans and the placard requirements section #6 above.

TRANSFER SWITCH

p) Verify the Automatic Transfer Switch is listed for emergency use. CEC 700.5 (C)

q) Verify the control wiring is kept separate from all other wiring. CEC 725.136

r) Verify the size of the conductors (wire) meet CEC requirements, approved plan, and generator nameplate rating requirements. CEC 110.3(B)

s) Verify the transfer switch is rated at the same (or above) KVA rating that generator will provide.

t) Verify the Amps Interrupting Capacity (AIC) of the generator's Automatic Transfer Switch (ATS) is suitable for the available fault current at the main electrical service. (Typically, 10,000 AIC for residential only) CEC 110.9

u) Where the Automatic Transfer Switch (ATS) is the first means of disconnect from the utilities, the ATS shall be rated as service equipment.

v) Other code requirements apply to the installation of a generator, this is not a complete list of requirements. This handout is a guide to help with the installation and it is not an installation manual.

For free to use code books, please visit the link below to the Building Standards Commission website.

https://www.dgs.ca.gov/BSC/Codes