



SUSTAINABILITY ADVISORY COMMITTEE

Green Paper: Back Up Power Building Electrification

Prepared by the Sustainability Advisory Committee

With the multiple power outages we experienced this winter due to wind storms and fallen trees, some residents wonder if gas appliances are a better choice, despite a movement by some jurisdictions towards building electrification. The answer is no, in most cases.

Items	Power Outage Functionality	Explanation
Gas Furnace	No	Many parts of the furnace rely on electricity to operate.
Gas Water Heater	No, in most cases	Pre-1980's, gas water heaters operated solely on gas. Currently, the pilot light needs electricity to reignite, along with the thermostat to regulate temperature. If the heater is plugged in the wall, it will not operate during a power outage.
Tankless Gas Water Heater	No	Built-in safety features, such as the heat sensor, run on electricity.
Gas Cooktop	Yes, depending on the model	Some models allow the flame to be lighted with a matchstick. The owner manual of the cooktop should include this information.
Gas Oven	No	The pilot is ignited using an electric mechanism.
Gas Fireplace	Yes, depending on the model	Similar to a gas stove, the flame could be ignited with a matchstick and not require electricity.

Sources for backup power consist of generators, battery storage of energy, and transfer of energy from your car. The generators, a conventional source of backup power, operate using gasoline or propane for short-term usage during outages. The storage of energy at home is achieved by using storage batteries to keep solar energy available for periods of high usage or low production. Other recent and much more affordable options include sourcing power by transferring energy from your car, or bivalent charging. A few electric vehicles offer this technology, and more are coming onto the market. Note that California Senate Bill 233 would require bi-directional capabilities for electric vehicles starting from models produced in 2027.

Sources:

<https://www.epa.gov/indoor-air-quality-iaq/power-outages-and-indoor-air-quality-iaq>

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB233

<https://oregoncub.org/news/blog/gas-myth-all-gas-appliances-work-in-power-outages/2489/>

<https://www.progasllc.com/do-gas-appliances-work-in-power-outage/>

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