

# APG Electric Co.

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## WHITE PAPER: RESIDENTIAL POWER BACKUP STRATEGIES

**A** PG Electric Company is a full-solutions provider of services to homeowners in Sonoma County. This free “White Paper” offers a glimpse into a practical, hands-on set of solutions to help you maintain some semblance of your lifestyle when power is either damaged or purposely shutoff for safety reasons.

I am George Moskoff, the owner of the company and the father of our 32 year old lead technician, Alexander Moskoff. Along with Damian Dean and Ryan Densmore, we proudly share our outstanding customer reviews on [Yelp](#) and [Google](#). I hold a graduate degree in Biochemistry from the University of Michigan (1978) so, hopefully, I know how to analyze situations and come up with innovative solutions.

In this document, we’re offering a sneak peek into a combination of electric / backup technologies that will allow you to live your life and stay safe without spending a fortune for something...that might not happen (an electric outage).

I’ve been serving customers large and small in the construction trades since 1995 when we lived in Illinois. I obtained my license in California in 2006.

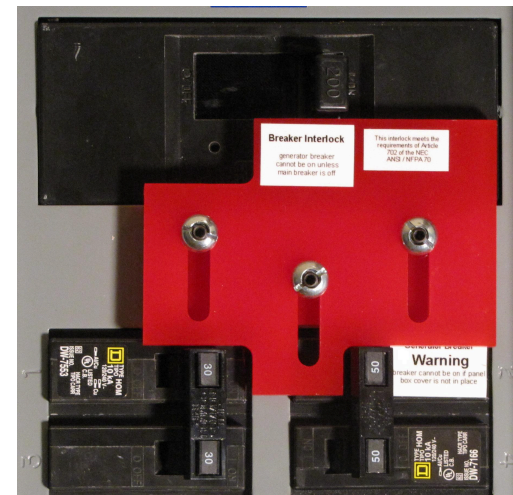
### CONCLUSION (This is the take-home message; you don’t have to read anything else)

**P**reparing for power outages due to PG&E’s PSPS and pending fires is prudent. Whole house generators (WHG) that are designed to run all the time are expensive, noisy options that are more expensive than other good options that cost 30% of what a WHG will cost.

The less expensive solutions: Uninterruptible Power Supplies for Wireless router, computers. A portable backup generator with an Interlock to support your whole house; this generator would, ideally, be run for 30 minutes every six (6) hours or so. That would allow you to charge your depleted UPS’s and get your fridge to cool down.

### SITUATION ANALYSIS

**S**ince the Tubbs fire in Sonoma County in 2017 that wiped out more than 5,000 homes in Sonoma County, we have developed a better collective understanding of the threats posed to our way of life. Climate change, PG&E power line management deficiencies and other threats are now more clear to us.



*Example of Mechanical Interlock*

Staying safe in our homes, with smoky air outside, often requires that we close windows. If there's no electricity, how do we power our air filtration devices, our air conditioners? It's a quandary.

Our biggest problem, I think, is that the trend is getting worse even as PG&E is doing a better job of managing risks from its grid. In 2019, we saw 259,823 acres burned in California from 7,860 fires. In 2020, the number of acres was 4.2 million from 9,917 fires: the worst year in California's long history of wildfires: unforgettable and awful superlatives.

## PRUDENT, COST-EFFECTIVE SOLUTIONS TO INEVITABLE POWER OUTAGES

**T**ake home message from us: we don't think you need a 22 Kw (90 amps) whole house generator running all the time to keep your house and life intact. We have customers supporting their entire home (including their furnace and AC condenser) with a 7500 Watt temporary, portable generator that they run part of the time. (About \$1,300 to purchase from Costco.).

Part of the time? What do we mean exactly: run it for 30 minutes every 4 hours.

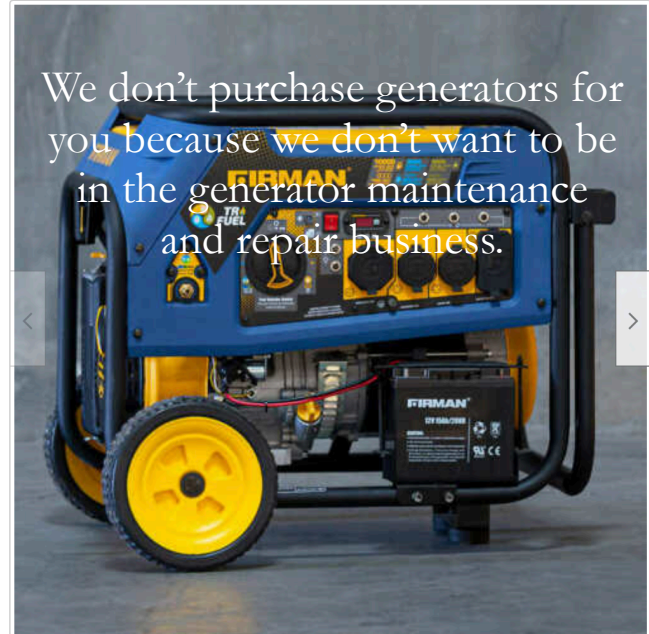
If you combine the generator with Uninterruptible Power Supplies for your computer and Internet router, you've got some cost-effective, quiet solutions to keep you connected. (By the way, your big screen TV will draw about 70 Watts or 0.6 Amps: the UPS can support that, too.).

The UPS can power your Internet router for about four (4) hours according to the latest research. (Most of these devices have displays that tell you how much longer they can power the devices before the batteries are depleted.)

Some of these generators, like the one pictured above, will even run off of natural gas. Cost for a plumber to get you some new pipe and a valve: no more than \$650. And, some come with remote starters so, once you get it connected, just press a button from inside the house and you've got power restored...*to the whole house.*

So, what's the formula? Have UPS in the system all the time. Run the generator every four hours for about 30 minutes to keep your food cold and charge up your UPS devices. Then, shut it off. Not a bad deal, right?

Check out this Google search on how often your fridge needs power to keep the food cold.



**240Volt Firman 7500 Watt Tri-Fuel Temporary / Portable Generator: Will Support Your Whole House (32 Amps)**

## From a Google search

### People also ask

How long does a refrigerator need to run to stay cold?

Keep the refrigerator door closed for as long as possible.

According to the United States Department of Agriculture (USDA), in a power outage, a closed refrigerator will stay cold for **up to four hours** and a closed freezer will keep its temperature for 24 hours if it is half-full and 48 hours if it's full. Feb 16, 2021

<https://www.insider.com> › Lifestyle › Food



*Uninterruptible Power Supply  
recommended by NY Times  
“Wired” Staff*

**Y**ou can start to see - from this quick Google search — why we steer our customers to more simple, less costly solutions that will run you a total of about \$4,500 versus \$18,000 for a whole house generator. OK, you want have an Automatic Transfer Switch (ATS) that turns on the generator when PG&E’s power goes off but you also won’t have a unit sucking natural gas 24/7 running on idle most of the time; it really doesn’t take much power to support your whole house. Without running your AC condenser or electric cooktop, most homes draw less than 4 amps most of the time.

Noise? Well, a Generac unit inside its cabinet will generate about 72 dB of noise and the portable generator will put out about 65 dB. Not a big difference. A bit more noisy than you’d want to stand next to and have a conversation.

Oh, the [New York Times](#) tested several different UPS models. These are the results and their recommendations: [CyberPower CP900AVR](#) is shown to back up your Cable Modem and WiFi Router for four (4) hours.

Hope this has been helpful. You’ve now got the low-down on another option. Options are good.



*Damian and George taking a break.*