

**DOCKETED**

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*Comment Received From: Rob Koslowsky  
Submitted On: 3/15/2021  
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## **Resiliency Means to be Prepared**

To Whom It May Concern:

Please repeal the 2019 Building Code making all-electric residential construction a mandate. Choice for homeowners to use natural gas as an option must be restored to ensure resiliency. The submission below - Resiliency Means to be Prepared - reflects some of the reasons to repeal the all-electric mandate. A PDF version is also attached.

Please repeal the all-electric mandate as well as removing any reach code option allowing the banning of natural gas in the 2019 and/or upcoming 2022 Building Codes.

Thank you for your consideration,  
â€¦.Rob

*Additional submitted attachment is included below.*

## Resiliency Means to be Prepared

**“Resiliency means the ability to take a blow and not be bowled over by it; it means designing . . . structures that can bend but not break; it means blackouts that bounce back into brightness rather than cascade across the continent; it means backup systems so seamlessly integrated into primary systems that one doesn’t even notice the switch between them.”**

**– Gretchen Bakke, *The Grid*, 2016, p.192**

The recent years of numerous fire seasons has taught us to be prepared.

Across Sonoma County, homes are being hardened against embers.

Five-foot wide perimeters, free from plant life (organics), are being established around homes and buildings.

Utility and county vegetation management is fully underway, giving a much-needed shot in the arm with tens of millions of dollars provided by the PG&E Tubbs Fire settlement funds for both the City of Santa Rosa and its county, Sonoma.

“Go Bags” or “Go Kits” are pulled together and ready for the next evacuation.

Wills and last wishes, pushed forward with even greater urgency by the current and future pandemics, are being written and signed.

Mobile phone providers are being mandated to provide back-up power at cell towers to ensure the communication infrastructure is operational for both first responders and those residents who require real-time information to flee their homes, as needed.

And for those commanded to “shelter in place” by Emergency Services, home energy systems are being upgraded. With resiliency the watchword and to ensure personal energy independence, there is, as of this writing, one good solution.

### *The Home Nanogrid*

Electricity plus natural gas services delivered to the home ensure the greatest resiliency for homeowners or renters.

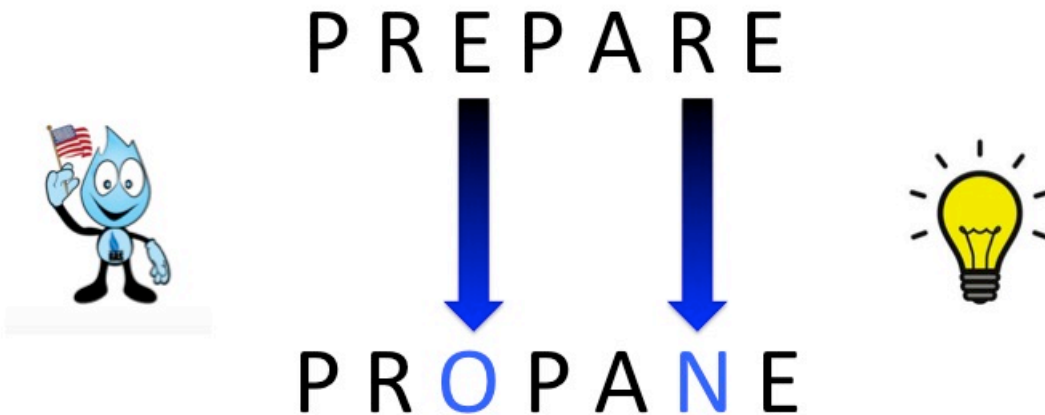
The second line of defense is to install a whole-house, natural gas generator to automatically replace the electric supply when it is compromised [1]. It’s especially useful for multi-day PSPSs or rotating blackout events.

The third line of defense is to install a co-located propane tank, to replace the natural gas supply, in the event that the utility’s gas supply is also lost during an earthquake event.

In this way, each homeowner or renter operates his or her independent island of energy self-sufficiency and resiliency.

*Fossil Fuels Ensure Backup Power is Available*  
Propane is the last line of defense for preparedness.

**Resiliency Means to be PREPARED**  
Preparation includes **gas** + **electric** fuels



Prepare to be resilient with **gas ON**, using **propane** or **natural gas**, even without an electric supply:

- Backup generators (whole house)
- Space heating with gas fireplaces
- Hot water with gas water heaters
- Gas cooktops for hot meals

R.K. Koslowsky, 2021

Recognizing the criticality and mobility of fossil fuels in an emergency, the federal government sent massive diesel generators to Texas in February 2021 and also shipped diesel, “to help with backup power amid the massive outages that accompanied the recent cold snap, the Biden White House announced . . . “A Federal Emergency Management Agency spokesperson said the agency has sent 60 ‘very large’ generators to the state to help keep hospitals and other crucial infrastructure online [2].”

At the federal level, fossil fuels are deemed crucial for resiliency. At the individual level, natural gas and/or propane [3] are the best and most cost-effective solution for resiliency during a disaster.

So, it’s time for the State of California to “recall” reach codes that prescribe all-electric housing and rollback the associated natural gas bans. Living in an all-electric environment compromises resiliency and puts residents at risk during a simple power outage, or worse, during a major disaster.

**“[FEMA is] preparing to move diesel into the state to ensure the continued availability of backup power, which of course is a major issue on the ground to key critical infrastructure, including communications, hospitals and water.”**

**- White House Press Secretary Jen Psaki, February 17, 2021, on the importance of fossil fuels available as backup for loss of electricity**

**“Resiliency means accepting that sometimes things do break and then imagining and engineering ways not so much to make them unbreakable, as to consider how the might be less thoroughly broken in the first place and thus also easier to fix.”**

**- Gretchen Bakke, *The Grid*, 2016, p.193**

**“The transition [to net zero] might exacerbate inequity, concentrate opportunity in the hands of a few, accelerate the offshoring of manufacturing, and fail to mitigate job losses in industries and regions that are left behind.”**

**- Accelerating Decarbonization of the U.S. Energy System, *National Academy of Sciences*, 2021, p.8**

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[1] *Natural Gas as Backup Is a Superior Alternative to Solar + Battery*, R.K. Koslowsky, submitted November 9, 2020.

[2] FEMA sending generators, water and blankets to Texas, Benjamin Wermund, *Houston Chronicle*, February 17, 2021.

[3] In the more rural settings, both diesel and propane are used to ensure resiliency. One family of a Tubbs Fire rebuild recently achieved its goal of individual energy independence and superior resiliency: “An underground propane tank powers a generator that will keep the well going during any blackouts. They also use propane to more efficiently heat the water used in their radiant heating system in the floors.”

Firewise Lessons: Couple builds dream home in Tubbs burn area, but with fire-resistant tactics, Meg McConahey, *The Press Democrat*, February 27, 2021, p.D6.