

# SOMERS FIRE DEPARTMENT

## Photovoltaic systems concerns for firefighters

Dear Homeowner,

The Somers Fire Department would like to talk to you about residential solar concerns from our perspective. Photovoltaic (solar) systems are the fastest growing energy technology in the world. While we support the push for green energy and renewable resources residential solar raises some concerns for the fire service. A photovoltaic system on your roof equates to having a generator that is constantly producing energy every time the sun is shining. This generator however cannot be shut off by "flipping a switch". If you have a fire at your residence and require our services not only do we have to worry about grid power but also the secondary power of solar. Conduit carrying electricity from the panels to your inverters can be run anywhere including through the attic and walls of your residence. This presents a challenge to us during fire attack and overhaul. Overhaul is when the fire service has extinguished the bulk of a fire and has to open up walls and ceilings to find any hot spots that could cause a rekindle and further damage to your residence. Other concerns for firefighters include rooftop operations. A common tactic in structural firefighting is venting. Venting is the discipline of opening up a structure at its highest point, as close to the fire as possible to release the buildup of fire, superheated gasses, and smoke. Ventilation is proven to reduce the amount of fire spread and make a smoke and heat filled environment more survivable for anyone trapped in it. With rooftop solar, it limits the area the fire department has to vent a roof. The Somers fire department requests solar installers utilize fire setbacks to aid the fire department in protecting the lives and property of the residents of Somers. **We recommend 18" from the ridgeline to the first row of panels to allow for the hooks of our roof ladders to be secured over the ridge. Roof ladders are used anytime fire department personnel are operating on a roof. The ladder spreads out the weight of the firefighter lessening the potential of roof failure and helps prevent the firefighter from slipping off of the roof. The next setback is on the sides of the arrays, we suggest 24". This accounts for the width of a roof ladder. See attached diagram for reference to specific roof types and fire setback recommendations.**

A common type of fire we respond to is the chimney fire. Creosote from burning wood builds up in the chimney and when not cleaned creates the great potential for chimney fires. Chimney fires are attacked from the roof of the residence. The department must ladder the roof to be able to access the chimney. Once at the chimney, the firefighters utilize nondestructive methods of extinguishing the fire such as: bags of dry chemical dropped into the fire and using chains to dislodge any burning material stuck in the chimney. A chimney fire not quickly extinguished has the potential to spread from the chimney into the walls and attic surrounding it. This type of fire causes an extensive amount of damage and often results in displacement of residents. We rely on our training to quickly ladder the building and attack the fire. Rooftop solar can inhibit or prevent this. Rooftop solar presents a unique electrocution hazard to firefighters. Residential PV systems can carry up to 600 volts DC more than enough to seriously injure or kill a firefighter.

The advantages of solar power speak for themselves, we just hope you consider the safety of your firefighters when considering going solar. Urge your installer to follow the "Somers Fire Department Suggested Photovoltaic Systems Installation Practices." This document ensures safety not only for us but for you, your family, and your property.

Thank you

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