



## **CAMPUS FIRE SAFETY CODE TALK**

### **Campus Fire Safety e-NewZone**

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#### **Alternative Energy Sources: A Life Style Change and a Life Safety Concern?**

Tom McGowan, Senior Fire Specialist, NFPA

Everywhere you turn today you see alternative or green energy source equipment. Whether its wind or solar, passive or active, they have become part of the landscape. They are commonplace on rooftops, sides of buildings, integrated into the roof and walls of buildings and ground mounted on former golf course property, residential backyards and road sides. Some don't appear to be doing anything, and others you know are operating because they are rotating or spinning. I would venture to guess that some part of the property on college and university campuses have areas where alternative energy sources are located.

*So why an article about green or alternative energy sources for college students? It's all about your safety and knowing that these energy sources produce a potential risk to your life safety! As commonplace as these sources may be to your everyday life, the equipment is designed to reduce our commitment to traditional energy sources but are "out in the open". Consequently, while they may be protected by security barriers such as fencing, there may be those times when, as a student, you become curious and have a need to explore.*

There are many college and universities offering classes on alternative energy and conducting research from the undergraduate level to the graduate level. Independent



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research and testing laboratories continue to conduct studies and publish findings on various aspects of clean energy sources. Some include issues related to firefighter safety.

*Why talk about firefighter safety in a college student article?* The fire service is learning that there are inherent risks associated to today's technologies. That includes the alternative energy sources domain. Ongoing training in the fire service continues as these technologies and advances are made and consequences are realized. But even a routine activity performed on the fireground around these devices can cause immediate injury and in many cases loss of life if the firefighter is not careful. Since these sources are "out in the open" more so than traditional electrical sources, college students and the public as a whole should have some awareness of the potential life safety hazards associated to alternative energy sources:

- *Simply, just stay away from the equipment!* These sources are designed to create energy for hot water or electricity so there is a potential health and hazard risk. Don't go beyond the fence line, don't go to a roof that has a solar or photovoltaic array set on it.
- *Different types of electric energy cause greater harm.* The type of energy produced by many of these alternative equipment sources is direct current (DC) versus what you find in your home which is alternate current (AC). DC power is inherently more dangerous to health and life if you were to come in contact with it. Its tendency is that the DC causes you to "hold onto" the source rather than "kick or release" you away from the source.
- *What looks to be something ornate may be very practical to our energy needs.* Designers are becoming confident in the ability to integrate or camouflage panels into the building architecture and the landscape. By showcasing the equipment as art, flush-mounting it to the roof, or mounting panels to a post



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and hanging imitation tree limbs from it, may cause us to be less cautious. Each is safe in design, but it would be wise not to step on or climb over or hang from these utilities. The potential for destroying the integrity of the mounting system or the energy source themselves is possible.

- *Energy is always being supplied.* Never assume that because it is not a sunny day or its nighttime or the wind speed is not causing the turbine to rotate that energy is not being produced. Many alternative source energy systems are passive by design, others are connected to traditional energy sources, and still others have battery backup storage components that when the sun or wind is not steadily producing energy the system will augment the energy supply.

We are enjoying these alternative energy sources and our continued efforts towards becoming more energy independent from fossil energy generating sources. With it comes responsibilities and a need to be aware of the risks and hazards associated to photovoltaic, solar, wind, and the like.

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