

The Command Post

PRESIDENT'S MESSAGE - LEADERSHIP POINTS TO PONDER

In a few weeks dozens of new fire chiefs will be sworn in across Bergen County; some are new to the rank, some are moving up a rung, and some are recycling around through the ranks. Below are a few points you might find useful in your new position as you continue to climb, not the management ladder, but the leadership ladder of your department.

- **Have Command Presence** – Part of being professional is looking the part, wear your gear and helmet, show that you have the confidence, expertise, assertiveness, and ability to adapt to changing circumstances, look like you know what you're doing. Be confident and use a standard set of tactics on and off the fireground, a standard set of tactics should produce a standard set of outcomes, if not, be flexible and adjust. When all else fails, remember the people under your command, take care of your people. “

“Command Presence is the perceived and portrayed ability to lead,” FDNY Deputy Chief (ret.) Vincent Dunn

- **Be Tough, but Fair** - Set your standards high and encourage your people to meet them. Tell them what your standards and expectations are. I'm always amazed by our brothers and sisters, set the bar in your organization high, and they will meet it, just be sure you're already there.

- **Get Out From Behind Your Desk** - In the modern day vernacular it's called 'Management by Wondering Around.' Go see what's happening yourself. Don't stop going to fires. Get out and visit, every company, every firehouse. Go on an EMS run. Your people will see you are interested in their problems and welfare.

"No good decision was ever made in a swivel chair," General George S. Patton.

- **Find the Critical Path to Success** - Prioritize your activities; don't waste time on trivial matters. Become personally involved, don't leave things to chance. You have Deputies, Assistants, Captains and Lieutenants, use them, give them a project with the tools for success and then get out of the way. Let your people be innovative and creative. I'll be amazed.

“Imagination is more important than knowledge,” Professor Albert Einstein

- **Be Sensitive** - Listen to your people. Be perceptive, communicate often and get to know everyone on the team. You already know 80% of the people on your department, get out there meet the rest. Get to know the new members, reach outside your comfort zone, and get to know the probie that's not quite like you.

- **Don't Take Things for Granted** - Keep on top of things. Don't assume anything. If something needs to be fixed - do it, don't procrastinate - do it and do it now, then monitor the situation. “Trust, but verify,” President Ronald Reagan

- **Search out the Problems** - If you think everything is fine and there are no problems in your organization, you are ignorant. Search out the problems, find them. Foster an environment that encourages open, clear

communications. If you shun problems they will get bigger. Ask your subordinates for suggestions, you'll be amazed at the solutions you'll hear, meld them together.

- Don't Procrastinate - The problem only gets worse if you procrastinate. Therefore, address the problems when they arise. Don't put off hard decisions - make them. It won't really be easier tomorrow. Just do it.

"I would rather have a good plan today than a perfect plan two weeks from now,"
General George S. Patton

- Don't Tolerate Incompetence - People who are lazy and/or disinterested should be lead, by the nose if need be to other opportunities. The work we do is too important, too dangerous for malcontents (and you'll notice the malcontents are the ones who always seem to avoid the real labors of being a firefighter, let them go). You need people to get the job done. Have the courage to weed out and terminate the bad apples in the ranks. Don't fall for the trap, as volunteers we have to take everyone and as a career department it's impossible to fire anyone, no its not, it just takes some work, and some documentation. For the other 99% use positive motivation - encourage people when they are doing good work, recognize their efforts. Then they will do even better.

"Too often, people are assumed to be empty chess pieces to be moved around by grand viziers. How many [managers] immerse themselves in the goal of creating an environment where the best, the brightest, the most creative are attracted, retained, and—most importantly—unleashed." Armed Forces Chief of Staff & Secretary of State Colin Powell

- Be Honest - Integrity is one of the most important aspects to someone's character. People won't trust you if you're dishonest. We've all have experienced firehouse gossip as a leader don't tolerate it. Don't speak about people behind their back, be the better, and speak to people face-to-face. Tell it like it is - be up front with people. Create an atmosphere of trust and confidence. Be a leader, an example for your people.

Summing Up - your rank is Chief; your task is to be the leader. It requires hard work, enthusiasm, and sensitivity to what's going on. Establish your expectations, be involved, and listen. Take care of your people and remember integrity and honesty is basic to everything.

"If anything goes wrong, I did it.

If anything goes semi-good, we did it.

If anything goes really good, then you did it.

That's all it takes to get people to win football games for you."

Paul "Bear" Bryant, University of Alabama football coach

Firefighters will respect the white helmet, be sure they respect the person wearing it. Good Luck in your new command role and stay safe.

Stay Safe,
Peter Hodge President.
Bergen County Fire Chief Association.

HOTBOX: SOLAR SAFETY FOR FIREFIGHTERS: THE MYTHS AND THE FACTS

By Dan Fink

Not too far back in the past, only wildland firefighters would ever expect to see solar electric panels on roofs and in yards during an incident. Such power systems were almost exclusively installed by folks living in remote, rural homes and cabins, and wildland firefighting doesn't usually include entering burning structures, ventilating roofs or saving homes already engulfed in flames. These systems were always used to charge banks of batteries in the home, and ran on 12, 24 or 48 volts DC.

Today the renewable energy landscape has changed significantly, and urban firefighters are just as likely to encounter solar power systems as their rural brethren. Indeed, most of the renewable energy market these days is geared towards "grid-tied" systems where the homeowner sells electricity to the utility when there's extra being produced. And, these new systems don't run at benign car battery voltage anymore, but are pumping power at up to 600 volts DC whenever the sun is shining!

It's extremely important for firefighters and their commanders to be able to identify homes with solar electric (photovoltaic or "PV") systems and understand how these systems work.

Much inaccurate information about PV and firefighter safety has been published on the Internet recently, even to the point of recommendations to "let it burn" if solar panels are spotted on a roof. As a firefighter and renewable energy consultant, I hope to set the record straight.

The basic issues

- Flat panels on roofs, poles and racks are not always electrical. They could be providing room lighting, hot air, hot water or electricity, and multiple types of panel could be combined in one installation.
- If there is a solar electric system involved, "pulling the meter" will only kill power coming in from the utility grid. Other circuits may remain live — household circuits if the system has battery backup or an auto-start gasoline generator, and PV circuits whenever the sun is shining. Multiple disconnects for various parts of the system are very common.
- A Hot Stick will not detect live DC voltage; these work only with AC.
- Roof access may be limited by solar panels of any type (see photo 1). While some areas have local ordinances requiring setbacks and pathways, others do not or the system may have been grandfathered in. The roof areas on which you can walk or



Photo courtesy DOE/NREL

An example of limited roof access. Such an installation would not meet code in some areas. (Photo 1)



Photo Northern Arizona Wind and Sun
A large battery bank, used to power a home during a utility grid blackout. (Photo 2)



Photo Solatube - A solar tube skylight. (Photo 3)

HOTBOX: (continued)

cut into for ventilation may be very limited. Putting a foot or ventilation saw into a 600 volt DC solar array during daylight hours is dangerous!

- Roof-mounted systems of any type are fragile, and will not support the weight of firefighters or equipment. They are also very expensive, and damage should be avoided if possible during unknown or minor incidents, such as a possible chimney fire.
- Renewable energy system components and disconnects may not be properly labeled, or you may not be familiar with what the labels mean.
- Large backup battery banks (see photo 2) may or may not be included, and can pose chemical hazards (sulphuric acid), explosion hazards (hydrogen gas) and electrical hazards (powering household circuits even after you pulled the main meter).

Safety-Procedures

(for when you spot "funny-looking objects" on a roof or in a basement)

Of course each department must develop its own SOPs for responding to homes with PV systems (I hope not "Let it burn!"). This article is only here to give you some suggestions about factors to consider.

- Identify the system, if possible. Is it pushing only natural light (photo 3), hot air (photo 4), hot water (photo 5), electricity (photo 6), or a combination (photo 7)?
- Hot water, the ones on the left make electricity. (Photo 7)
- Only solar electric systems pose significant firefighter hazards, but note that "solar shingles" may be hard to spot (photo 8). Lots of pipes and a few thin wires (photo 9) indicate a solar hot water or hot air system with low-power electrical controls. Wires in conduit with no pipes indicate solar electric.
- Locate the central electrical system control panel (photo 10) if you need to disconnect circuits. All renewable energy systems are controlled from a central point. There may be other breakers that disconnect individual parts of the system, but these could be located outdoors or on the roof. Battery banks are always located near this control point, and may be the cause of smoke or a smoke smell in the first place.
- Assume every electrical circuit is live, even if you have pulled the main meter and shut off visible breakers. When the sun is shining, dangerous DC voltage is still being generated in the PV panels. The only way to eliminate this is to cover all panels with an opaque tarp. Note that scene lighting is not powerful enough to generate dangerous voltage from a PV array, but lightning may be. If the home has battery backup, household AC circuits may be live at any time.

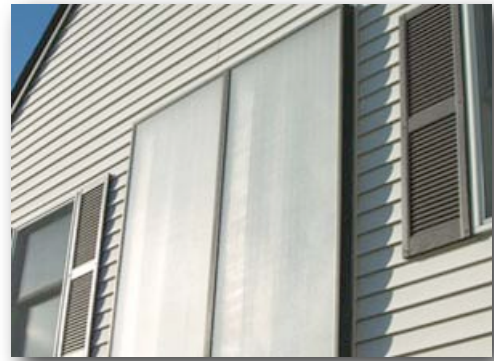


Photo The Alternative Energy Store
A solar air heating panel. (Photo 4)



Photo The Radiant Floor Company
Two types of solar hot water heating panels (Photo 5)



Photo Dan Fink - Typical solar electric panel (photovoltaic, or "PV"). (Photo 6)



Photo courtesy DOE/NREL - The panels at upper right are for hot water, the ones on the left make electricity. (Photo 7)

HOTBOX: (continued)

- Do not step on or cut into PV panels during roof ventilation, especially during daylight — find another place to ventilate if possible, or change your attack strategy. After dark, only non-lethal battery voltage may still be present in wires leading to panels and indeed anywhere in the system (if you did not locate the proper breakers to stop it).
- Watch for changing conditions — for example, during salvage operations after dark, wires damaged during an attic fire may become live as sun hits the PV panels in the morning, and their melted insulation could make metal conduit live too.
- Many renewable energy system installers now keep a 24/7/365 emergency contact number, so incident commanders can get a technician on scene ASAP to disconnect circuits if needed.

Conclusion

I hope I've been able to explain enough about renewable energy systems here to help keep firefighters safe, and to help departments develop training programs and SOPs. My entire training document on the topic is available for official use [here](#).

Dan Fink has been a firefighter for the Rist Canyon Volunteer Fire Department in Larimer County, Colorado, for 10 years, and has lived off-grid in a remote corner of their response area for 18 years, 11 miles from the nearest utility electric or phone line. He has been certified for wildland and structural firefighting, with a BA in Technical Journalism from Colorado State University. Dan is a renewable energy consultant and educator with 15 years experience, and his articles and photographs frequently appear in such magazines as Home Power, Back Home, the Energy Self Sufficiency Newsletter, and Lighting Today. He is an on-call "Ask the Experts" columnist for Home Power Magazine and is co-author of the book "Homebrew Wind Power." For details on solar safety as well as presentations he offers, which feature a question and answer session and local site visits, contact Dan at danbob@otherpower.com.

Additional training video by Capt. Matt Paiss, of the San Jose, Calif., Fire Department, offering further understanding of the how solar electric systems work and tips on how to stay safe. Matt is also the PV Safety Instructor for the [NGLB Training Group](#) and can be reached at mpaiss@earthlink.net.



Photo courtesy DOE/NREL - 'Solar Shingles' may be nearly invisible on the roof. (Photo 8)



Photo Peak to Prairie Home Inspection Service - A typical solar hot water system control center. (Photo 9)

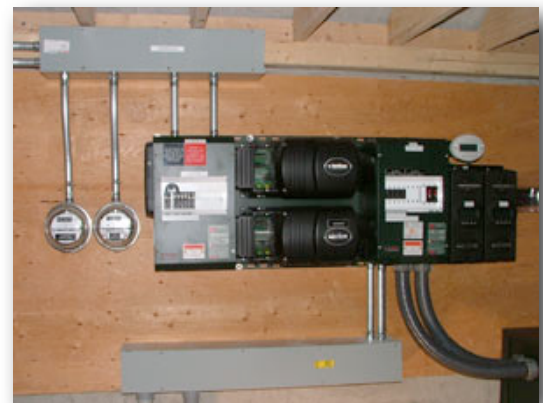


Photo Rochester Solar Technologies
A typical solar electric system control center. (Photo 10)

MESSAGE BOARD: FIRE SUB-CODE OFFICIAL COURSE

A Fire Protection Industrial-Commercial Specialist (ICS) class has been scheduled starting in January 2010 at Bergen Community College.

DATES: Tuesdays and Thursdays until June 2010

TIME: 6pm to 9:30pm

LOCATION: Ciarco Center Campus in Hackensack (confirm location when enrolling)

The Fire Protection ICS program is the first step in obtaining a license to inspect and enforce the Uniform Construction Code. This program has not been offered in Bergen County for many years and until now has meant students must travel greater distances to other community colleges.

The program is open to any person wishing to learn how the fire protection sub-code regulates new construction and renovations of existing buildings. There is no prerequisite coursework required for this level of licensing. Persons already engaged in enforcement of the Uniform Fire Code should

strongly consider this step forward to expand their knowledge and licensing to include new career opportunities in construction code enforcement. Architects and other design professionals who seek to enrich themselves and gain a better understanding of fire protection systems are welcome and encouraged, along with anyone else interested in building codes and fire protection systems.

The course will be based on the 2009 editions of the International Building, Fire, Mechanical, and Fuel Gas Codes along with the 2007 Editions of the sprinkler and alarm standards from NFPA which are presently proposed for adoption into the NJ Uniform Construction Code. Coursework will include building code topics such as height & area, types of construction, hazardous materials, means of egress, & fire rated construction. Mechanical topics such as hazardous exhaust, ventilation, and appliance venting will also be covered. Fire protection systems including alarms, fire pumps, sprinklers, kitchen exhaust, smoke control, and chemical suppression systems will be explored in detail including code requirements, design considerations, and acceptance testing.

Registrations will open in early December through Bergen Community College - Division of Continuing Education. Interested persons may email below and will receive direct notification when class registration begins. Don't miss a chance to advance yourself through this opportunity! Any questions or interested persons may contact David Phelan @ dphelan@bergenfieldfd.org

Next BCFCA Meeting

Next BCFCA Meeting

Date: Monday, February 8

Time: 1930 hrs

Location: Lyndhurst FD
29 Delefield Ave

For directions visit our website under Meetings

COUNTY COORDINATOR CORNER

As we go into the New Year, I hope everyone stays safe. A few reminders:

FIRE APPARATUS INVENTORY - I will be sending out the fire apparatus inventory sheets with the local coordinators. Please fill out any changes and return to me at rauch@bclpsi.net or fax 201-785- 6036

Call County Police (201-646-2700) when you RESPOND out of your normal Mutual Aid area.

Congratulations to all the new officers, I wish you all the best in 2010.

Larry Rauch, County Fire Coordinator

