

Solar Killers

The opposition to current flow is often caused by the building departments. I know solar power is new to the building departments; they're learning how to permit these projects and get it right. I see that most, if not all, are doing this on trial and error. If a building department is going to permit solar, they need to be mandated to take classes on the installation and the laws attached to solar power and interconnect agreements. The lack of understanding results in either a permit or an installation that is faulty, or a permit process that argues and is completely unnecessary.

The drive is on to go green by the general public and all trades people badly need the work. Our economy needs this bump. I feel that we are at war to get solar permits, and the building department, politicians and the general public should embrace this. I spend more time preparing the permit package and dealing with the rejection from the building departments than I do installing the system.

In the Miami/Dade County building department, I was rejected five times and it took six weeks to get the permit through, pushing hard just to install four solar panels and a solar pool pump (Miami/Dade County passed a bill to expedite all Green Power permits before this application was submitted). I downloaded the permit requirements and prepared a permit package with those requirements, and brought them four copies of the permit packages. I went to the building department and waited for 2 hours on the first line, not as long as for contractor registration or to pay the application fee, but I didn't get out of the building department until 2:00 p.m. This was only to drop off the permit for review. They copied my packet, (they went paperless in their building department) and charged me \$18 to copy this to a file and pay a \$50 application fee. Three weeks later they rejected the package because they couldn't read the prints—(Rejection 1). For some reason the scanner didn't work.

Another 5-hour drive each way and half a day in the building department along with an additional \$18 for copying it again. This time I had them check to see that all pages were legible. Next, they rejected the engineering and wanted all pages of the UNIRAC manual signed and sealed by the engineer. My engineer flatly rejected their request and after his phone call, settled for the pages that pertained to the installation—(Rejection 2).

They rejected the prints I did (electrical contractor), even though I had delivered them and when they received them, nothing was said at the time. All they wanted was the notary seal verifying I was the person that drew the wiring diagram. I was thinking they should only reject a drawing that was a Code violation... who cares who drew it! A 10-hour trip and 2 hours in the building department—(Rejection 3).

Another rejection because they wanted a form signed that basically stated to the customer that installing solar power on the roof would ruin the roof, void the warranty and make the roof very difficult to reinstall—(Rejection 4). First of all, that's not true. If installed improperly, anything that penetrates the roof can wreck your roof. You must use sealer, use the proper bracket and hit the framing member with the proper screw. This is what the inspector must inspect; paper work doesn't seal a roof.

Rejection 5 was the stupidest of all. They made me provide them with FSEC certification on the system. I was installing a stand-alone, (no connection to the power company) solar pool pump, (pvpump.com). First, I tried to explain the difference between the grid-tie and stand-alone system. I was told it was in their by-laws for permitting, so I gave them the certification of a grid-tie system I previously installed, nothing even close to what I was doing. And it passed! The permit was ready for pick up - oh but not so fast. I needed to provide them with a list of my subcontractors. They required a plumbing permit for the pool pump and a roofing permit for the roof. The permit was \$350 at pick up.

Now here come the inspections. To be sure they didn't make me take the solar panels back off, I had a roofing inspection. He passed the inspection but red-tagged the job because the original pump installed at least 6 years prior didn't have a permit on record. I had to go back down to the building department, wait in line to get a permit to install the old AC pool pump. To be safe, I rewired the whole thing up to the current Code, called in for an inspection and was told I was on hold. I called in again and they told me that I had too many inspections and another \$50 fee was required for the next inspection... thank God they took debit cards! I got lucky this time with a substitute inspector. He wanted to know everything about the system and loved what I was doing and passed the inspection for the 6-year old pump and my solar water pump. He told me that the inspector was on vacation and said that the inspector would have kept it up because I was not from this area. He generates a lot of money for the building department so his boss likes him and will defend his actions. He also removed the red tag to finish the work on the solar power pump. Since the substitute inspector was going to be taking the other inspectors' place for one more day, I hurried and finished the job so he could inspect the job and I wouldn't have to deal with the regular inspector. It, of course, did pass the inspection. I was just worried what else he

would impose on my customer. I did try to protect my customer from the aggravation I was going through with the building department. I know that I appeared to her as disorganized and maybe even a beginner. There is only so much you can blame on the building department.

We're not done yet. I recently received a letter telling me that my permit was going to expire, and I would receive a fine of \$500 and my license would be put on hold until this matter was cleared up. I called the building department to clear it up, even faxed the signed permit card closing the permit out. The building department told me that I didn't get a building final, and that an electrical final was not a final. I pleaded with them, and I called in a final and the building department said that it was an electrical final, not a building final. I told them that they inspected the roof and the wiring, and there was no building or structure that was worked on. They were going to make me pay another fee and have another inspection and that I only had a few days left before they would have to re-permit the whole job, \$350 fee and all. I called the substitute inspector the next morning and told him what happened so he went into his computer and gave me the building final. So glad I caught this substitute inspector, I don't know what else I could have done.

Now for the City of Doral, Florida. I'm installing a simple 12-panel, 3 kW grid-tie system. I turned in the permit package through my partner, Carlos, at Kilowattdepot.com. He lives in Doral and knows the Mayor, City Manager and many more people in this community. I figured this would be no problem; I have a great permit package with anything you want to know about the system. Same thing at the Miami building department, one rejection after another, never on either job was there any Code violation or changes to the permit package, just stupid nonsense rejections, one at a time.

The first rejection was because they wanted a 3-ft space in-between the roof and the panels. We told them that the equipment would not be safe, would not meet the wind requirements, and had to be installed as listed and labeled. That was not enough for them. We had to provide a letter that we would install the panels on the rails as listed and labeled, and that this was not an air-conditioner device. Yes, I am not kidding you - an air conditioner! Next, we had to provide them with a letter that the panels would be installed 3 ft. from the roof's edge. We had to explain in the letter that the 3 ft. was for the fire department so they could walk on the roof to deal with a fire and that was not for all four sides, only where it's at the roof's edge. Next, we were rejected for a letter that needed to be signed by the owner that stated we would void the roof warranty and ruin the roof. We had to explain to the homeowner that we were not destroying his roof to get his signature. The next rejection was for my workers' compensation and occupational license. It was turned in with the permit package. I faxed their request with a nasty note that I know that this building department has those documents already and that rejection made it difficult for all contractors that badly needed work. Finally, they said the permit was ready for pick up but when we went to the building department, there was yet another rejection. They now wanted a letter from the Homeowners Association clearing us to install solar in the community. We did one better - we showed them the Florida State Statute clearly stating that a HOA had no jurisdiction on green energy permits and our permit could not be denied. It doesn't matter to a building department. They have a green light to break laws with no recourse - none at all! Where does a contractor go when this is happening to them? Who pays for the time it takes. They will stop a permit, fine, and suspend pretty much anything they want. All we can do is get mad, forge forward, and take another money loss. How can we charge the customer for this? How do we add this to the bid?

It's not all bad; we've had great experience with some building departments. The best building department we encountered was in Lake County, Florida. The Chief Building Inspector met with several contractors and Mike Holt to educate himself and his department several years ago. Mike Holt and Dale designed a format for all contractors to fill out. It has all the information his inspectors need for a proper inspection. The permit was issued while I waited. I was interviewed by the plans reviewer about the system to make sure I understood that the requirements needed were followed. The inspection was thorough and the inspectors were knowledgeable on solar installs.

The Sumter County building department was also an easy process but the inspectors have not been trained to inspect solar. I did know the inspectors there and they trusted my work, although I was happy to get a final inspection, I was concerned for the department's lack of solar training.

What I've found was that most building departments have provided no classes or training to their building department, and that most didn't even understand how it worked. Most inspectors said that this was the first PV system they inspected. Some inspectors wanted to know all I could tell them and others didn't want me to know they knew nothing, so I had to be careful what I said to them.

The bottom line is that building departments should be the first to know about how these PV systems need to be installed according to the NEC. All building departments need to study the interconnect agreement passed into law as well as the State statute on the new law in place to standardize solar power and green power products. If the building department doesn't know what they are doing and makes the contractor go through unnecessary procedures, it costs the contractor,

the owner, and the building department. If a building department doesn't know how to inspect or permit solar and doesn't inspect or permit these installations properly, it can put the public in danger. The job of the building department is to keep the public safe and to be sure work done is properly installed, not to stop contractors and owners from working on their house or building.

Furthermore in closing, I want to hear your experiences with solar power permitting, good or bad. Name names, e-mail and phone numbers. Reward those that need it but let's stop building departments from unnecessary delays to permitting - let's stop solar killers. I personally have lost many jobs because some people will not do the work if it requires a permit, they tell me their war story with the building department. The arms of a building department are way too large and intrusive. I personally think that the application process has become increasingly long, redundant and stupid. The application is important but what keeps the public safe is the inspection.

Perry Vogler



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Just a side note: I just received news that the Chief Building inspector of Doral was fired by the board for obstructing building permitting and the Mayor of Doral apologized for what we had to go through getting a solar permit. Nice job Mayor, for caring and doing something about it.