

Kelly Roofing's Top Tips for Installing Tesla Solar Roofs

Interview with Ken Kelly of Kelly Roofing

How it works

Tesla Solar Roofs are a true BIPV or built in photovoltaic roof system. It is not just a roof, it actually takes the sun's rays and converts them to electricity. Simply put; the roofing material provides protection to the building and produces electricity.

Why is that important? It's important because your clients don't have to pay for something twice. They don't have to pay for a roof and then put solar on top. With Tesla Solar Roof, there is only one system to maintain.

How does a roof produce solar power?

It is a system of individual glass tiles. They are placed on the roof optimized to the sun's azimuth. The goal is to get the most amount of sunlight year-round. These tiles are then connected to one another using built in diodes. Diodes are then connected to MCIs or "Mid Circuit Interrupters". Each string connects to an "Inverter," which converts the solar energy DC (Direct Current) to AC (Alternating Current), which is what your home runs on.

Does the whole roof stop working at once?

The analogy here is Christmas lights. One goes out, they all go out, right? Not with the Tesla system. Efficient troubleshooting and maintaining system integrity are built into the design. If there is an issue the MCI feature allows us to pinpoint which panel is disrupted. We then inspect and repair, restoring the system to full production capacity. The system continues working, even with one or more issues.

How does it fit together?

Tesla provides all major components of the roof system to ensure quality and compatibility. PV Tiles, accessory tiles, trims, detail components, sealants, underlayment, and valleys are all provided by Tesla, aside from few standard stock items, such as fasteners. Everything else that you're going to need for this system is provided from Tesla and fits together smoothly.

Warranties?

Tesla Roof Systems all have a 25-year limited manufacturer's material warranty. In our experience in installation and real-world testing, we have found the roof system to be very durable and strong.

Why roofers?

Solar has become a very popular product, and the cost is now very reasonable for consumers. More and more people are wanting to have this installed. A roof is the largest area to collect solar energy. Roofers are best skilled and positioned to provide this installation.

Tesla's mission is to "Accelerate the World's transition to sustainable energy," and the roofing industry has a big part to play in this mission.

The learning curve for roofers is on the electrical side. Tesla created a "plug-and-play" system of installation making it a very easy transition for any experienced roofing installer.

What type of roofing experience do you need?

The best, easiest transition is a roofer who is comfortable and familiar with installing metal and tile roofing. Installers of shingle roofing are also well on their way to being a successful efficient installer, here are just a few, simple items you will need to learn to install the system effectively. If you have installed flat roofing, you will have the longest training path ahead because the Tesla Solar Roof is designed to be installed on pitch roofs. Tesla does make traditional PV solar panels for flat roof installations.

What types of licenses do you need?

There are three installer certificates or licenses that may be required to install Tesla Solar Roof, depending on your local jurisdiction or government. A general contractors license, a roofing license, and an electrical license (or a sub-contractor with these licenses) may be required. A roofing license covers the roofing portion, or about 90% of the install. An electrical license is likely required to interconnect roof, inverter, and electrical panel. In rare cases, a general contractor's license may be required to act as the "controlling contractor" since both roofing and electrical is being performed.

Onboarding with Tesla

The path to become a certified installer is a three-step process: Onboarding, Pilot, Ramp.

Onboarding consists of setting up the legal and administrative framework for your partnership with Tesla and assigning responsibility to key parties within your company. You must apply to Tesla and work with an account manager to help you complete all the required items. [You may apply here - Partner With Tesla | Tesla.](#)

The Pilot portion consists of training and improving efficiency over your first few installations. It also includes developing pricing, quoting, marketing, and gaining official certification.

The final step is the Ramp stage. This is where knowledge is spread throughout your whole team, more crews are trained, mass marketing is conducted, and Tesla Solar Roof becomes a major part of your company's offering to all customers.

How long do these steps take?

Onboarding typically takes two weeks. The second step, Pilot stage, takes about three months to complete. Ramp is approximately another three months. The entire process from zero to hero will take about six months.

What key positions do I need in the company?

The key people within your company handle different processes throughout the Tesla Solar Roof journey.

The first step is your sales team. Salespeople should be specifically trained on Tesla and dedicated to that system. Hiring a sales rep with prior solar experience may be beneficial and help onboard your team more rapidly.

Next, you're going to need a Program Manager, someone who is completely knowledgeable about everything to do with the Tesla Solar Roof system. This person would take a project from sale through completion by helping administer the back-office steps, ordering materials, pulling permits, getting design approvals, communicating with the customer, communicating with the utility, and system activation.

The other important role is a supervisor trained in the Tesla Solar Roof system, and acts as a liaison between the program manager and the installation teams.

Finally, but the most important, the installation teams. They perform the magic and help roof owners enjoy their new Tesla Solar Roof!

How do you market Tesla Solar Roof?

First you need to make sure your whole team is on-boarded and understands the product. It's a new and exciting system. Everyone will be asking questions. Having the answers is key to credibility.

Second, the Tesla Solar Roof is the combination of roofing, electrical, and technology. Having a great website and marketing materials are important aids in helping consumers understand the process, benefits, and return on investment. Many customers will be curious and want an estimate for future budgeting purposes. This will overload your sales team. Responsiveness is key. We worked with our partner to design a simple, yet effective, way to help customers. Learn more here - www.deciderpro.com.

Design & Engineering

Unlike typical roofing systems, the integration of electrical requires design engineering and permitting. There are several firms that offer this service at a reasonable fee by simply providing the address and desired PV size.

Permitting

Your local jurisdiction will determine what type of permitting is required. Tesla provides testing, documentation, and training materials for jurisdictions unfamiliar with the Tesla Solar Roof. Plan extra time, and patience to navigate the process the first time.

Ordering & Delivery

Now that you've completed training, sold your first Tesla Solar Roof, completed design engineering, and secured the permit it's time to order.

How should you store the products?

Make sure you have a secure, dry, safe place to store your Tesla Solar Roof parts. There are electrical components that should be protected. Having a base stock of a few common parts will be very helpful during the ramp process. We rented a 10,000 sq/ft warehouse to help store these materials for \$2,500/month.

Roof Installation

Tesla provides all the training to install the product. Like any new system, the first one will run slower as your team learns the best way to deliver to jobsite, stage materials, load the roof, split into teams of two, organize duties, test as you go, install efficiently, punchout, and cleanup. After a few installs of the Tesla Solar Roof, it will be like every other roof system your teams are comfortable installing.

Electrical

Consider becoming a certified electrical contractor and hiring your own electrical teams because you'll be able to control the process from cradle to grave all internally and not rely on external sub-contractors. It changed the game for us at Kelly Roofing! When I speak to roofers across the country and Canada about the Tesla Solar Roof, electrical is often the barrier. I can't stress enough how easy Tesla has made this process. Tesla's engineers have designed an intuitive plug-and-play system that is easy to learn and install. Solar tiles connect together, into MCIs, into an inverter, and then into the panel. It's that simple. There are three rules of connectivity you'll memorize and adhere to; tiles to MCI, MCIs to inverter, inverter to panel.

Involve your local utilities commission

When you install a Tesla Solar Roof the local utility needs to be involved. Most have an application for interconnectivity and require an inspection before turn-on. They will likely require a new meter that spins both ways; one when providing power to the home and the other way when extra power from the roof is being pumped back into the grid. This allows your customer to receive “net metering” credits for the power they are selling back to the utility. The amount depends on local and state laws. Additional incentives may also be available directly from the utility.

Tesla uses remote software connection to monitor the roof system, provide updates, and report production through the roof owner's app. This information is all provided in the trainings, and the setup is simple to use.

Activation

Activation is a two-step process. One is with Tesla and the other is with the utility, as described above. Tesla's provisioning process is performed on an app via a step-by-step wizard guide. The utility process is much less nuanced as you'll receive an approval notification to turn on the system.

Customer Selling Points

Some of the questions we get all the time from clients include:

What is the cost of a Tesla Solar Roof?

The pricing is roughly the same amount as installing a premium roof, such as a tile, metal or a cedar shake roof, and then adding a traditional panel mounted solar array system. The typical payback period with incentives included is between 7-13 years. In Florida we do not have any other rebate programs except the federal 26% tax credit, which is nationwide.

Are there rebates and incentives?

Currently there is a 26% federal tax credit that can be used over a period of three years. This rebate applies to all solar installs. Tesla Solar Roof takes full advantage of the tax credit because the roof tiles are the solar panels, so the rebate applies to the entire roof system.

What about trees?

This is a big problem because the tree coverage blocks the sun from the roof. Make sure roof owners know that they might need a tree trimming service, or their roof won't generate its full potential. Our crews are trained on this service as well, but you might want to find a good sub-contractor to help trim trees.

Reflections

Our Tesla partnership was eye opening. For the first time in our company's history, roof owners are deciding to replace their roof because they want to, not because they need to. This is a paradigm shift in the sales process and I'm proud to be a part of it.

This has helped our revenue and standing within the community boom. Internally, there is a sense of pride throughout the team. The alignment with our core values to help others, do what is right, and Kaizen (continuously improve) could not be a more perfect match. Being in the roofing industry since 1972, we have seen a slew of changes, none quite as moving as this one.

A word to the wise. The roofing industry is not known for quickly adapting to new technologies. If you are considering a Tesla partnership, please know that Tesla is a very large company that operates like a startup. They are nimble, constantly improving, and customer focused. The partnership is rewarding, but will require speed to keep pace.