

eplica Safety Lines

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Solar Panel Installation Safety



Safety is an integral part of work done in the solar industry. Working safely is as important as the skills and techniques used with typical construction tools. More valuable employees consider good safety practices to be a skill.

A proactive approach is the first step on the road to developing safety policies that could save your life or the life of a co-worker.

The first step is identifying hazards. Learn the specifics about the work you are going to do, along with when and where it takes place.

Once the jobsite evaluation is complete identifying where and how work is being performed, develop safety strategies to remove or reduce the risks associated with the identified hazards by eliminating and controlling the hazard situation.

The following examples demonstrate work conditions that construction crews face. Additional situations in your job may need to be addressed. Use these common examples, but analyze your specific situation as well.

Develop a company personal protective equipment policy

PPE policies and procedures should be reviewed if an employee appears to need retraining or when introducing new PPE into the workplace. PPE can include the following:

- ▶▶ Eye and face protection (e.g., safety goggles, glasses, face shield, visor).
- ▶▶ Head protection (e.g., hard hats, helmets, hats). Hard hats are required if there is a risk of objects falling onto a person or a risk of hitting your head on an object. For example, if someone is working on the roof above you, you need to wear a hardhat.
- ▶▶ Protection of extremities (e.g., steel-toed

shoes, other protective footwear, safety gloves, latex gloves, kneepads).

- ▶▶ Respiratory devices (e.g., respirator, dust mask). These are especially important if you are working around lead paint or asbestos. Masks may be warranted in attic spaces around insulation.
- ▶▶ Hearing protection (e.g., ear plugs, canal caps, ear muffs).
- ▶▶ Protective clothing.

Develop procedures for using power tools and extension cords

A power tool used on the job must be maintained in a safe working condition. Employers must designate one or more competent persons to oversee the proper use and maintenance of tools used on the job. In general, equipment, including electrical cords, must be inspected prior to use to ensure it is in safe condition.

Employees must be trained in the proper and safe use of all power tools they use. If maintenance is required, employees must be trained to safely perform that maintenance.

Develop hydration and safe practices while working in hot sun conditions

Working in hot conditions can contribute to dehydration, the excessive loss of water from your body. Fluid loss can become severe enough to be life threatening.

Develop policies and procedures working with solar hot water collectors

Solar panels become very hot when bright sunlight shines on them. Caution should be used when handling collectors that have been exposed to sunlight. It is difficult to see how hot the collector manifold is until you touch it.

Develop policies and procedures for working with solar electric PV panels

Solar electric panels produce electricity when exposed to sunlight. Even overcast days can present enough light to create an electric potential in solar panels. The only method of 'turning the panel off' is to remove the energy source: sunlight. Caution should always be used when handling solar electric panels. Even a mild shock delivered at the wrong time can be dangerous.

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September Safety Tip: Personal Protective Equipment

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But these items—as important as they are—are only part of a bigger picture that includes a commitment to:

- Writing comprehensive PPE policies
- Selecting equipment that is appropriate for the risk and has the highest chance of being used
- Monitoring employee compliance
- Meeting the requirements of OSHA standards

OSHA's PPE standards are primarily featured in 29 CFR, 1910.132-138. There you'll find general requirements as well as the rules covering eye and face, respiratory, head, foot, and hand protection.

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Solar Panel Installation Safety

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• **Remain aware while at work.**

Stay actively aware of your work surroundings. If you see unsafe conditions or people working in an unsafe manner; stop and correct the conditions before an accident happens.

• **Know the safety policies at large developments or jobsites.**

If you are working on a large construction site, such as a new development or large commercial job where the solar contractor is a sub-contractor, it is important to meet with the jobsite general contractor to check in and ask about safety policies in place.

• **Working with other contractors?**

Make sure you are fully aware of any work that other contractors are performing at your jobsite. Talk with them and identify any potential safety hazards created by their work.

• **Working in proximity to mobile equipment?**

If there is mobile equipment on the jobsite, make sure you know where the equipment is and when it is being used. For example, if you are working on a ladder and there is a forklift operating nearby, make sure the forklift operator is aware of your ladder location.

• **Use a proper tool belt.**

A proper tool belt can save many trips up and down the ladder. A tool belt leaves your hands free to hold onto the ladder and can reduce one jobsite trip hazard (tools lying on walking surfaces). Extra tools and equipment should be safely lifted to work areas such as rooftops using a hoist or rope.

Evaluate your lifting-related hazards

Typical lifting issues for solar contractors include:

- ▶▶ Carrying and moving heavy tools and equipment.
- ▶▶ Loading and unloading equipment and tools from truck.
- ▶▶ Lifting tools and equipment onto a roof.

Always use two people to lift and load large and heavy items. One of the best ways to reduce lifting injuries is to use equipment to do the lifting for you. Cranes, hoists, and forklifts can be smart ways of eliminating lifting injuries. Using cranes, hoists, or forklifts can be more important when lifting large commercial equipment. Lifting large equipment by hand, even with several people, can be dangerous and lead to major injuries caused

by dropped equipment. When working with large and heavy equipment, rent a crane and use a forklift if needed.

Maintain a clean and safe jobsite

Floors and walkways should be cleared of obstructions and kept dry in order to prevent slips, trips and falls. Covers and/or guardrails must be used to protect employees from the hazards of open pits, tanks, vats, ditches, etc.

Procedures for working safely with ladders

Make it a habit to plan ahead. Know the type of work you are going to do and make sure the proper ladder is available. This prevents you from getting to the jobsite with the wrong equipment and either creating delays or, worse yet, producing a situation where you use the wrong ladder in an unsafe manner.

Recovering from accidents

Emergency planning protects lives, equipment, and property. By planning for emergencies you can increase your ability to act properly to avoid further injury. Do not wait for an emergency to start thinking about how to respond. It is difficult to think clearly during an emergency; training can increase the chances of a proper response.

• **Effective plans don't need to be elaborate.**

The plan should show that you've thought about how to eliminate and control hazards, and show workers how to respond promptly if something goes wrong.

• **Get others involved in planning.**

When workers participate in developing the plan, they contribute valuable information, take the plan seriously, and are more likely to respond effectively during an emergency.

• **Identify critical resources and rescue equipment.**

A prompt rescue won't happen without trained responders, appropriate medical supplies, and the right equipment for the emergency.

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September Safety Quote

“Wear the right protective equipment for the job.”