JOB HAZARD ANALYSIS (JHA)

Business name

Document: JHA-001 Rev 1
Prepared: Nov 9, 2026
Review by: Dec 9, 2026
Highest risk after controls: Medium

1. BUSINESS AND JOB DETAILS

Job	Solar panel removal and reinstall	**Start date**	Nov 9, 2026
Working hours	7:00 am to 3:30 pm	**Trade**	Solar

2. JOB STEPS, HAZARDS AND CONTROLS

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
1	Shut down the system and isolate AC and DC	Electric shock from live wiring Stored energy Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	1.1 Isolate the power before any work. Do not work live. [Elimination] 1.2 Lock out and tag the disconnecting means with your own personal lock and tag so the circuit cannot be energized (29 CFR 1926.417). [Engineering (guarding)] 1.3 Test before you touch: prove dead at the point of work with a tested voltage tester. [Engineering] 1.4 Only qualified persons work on or near exposed energized parts. [Administrative] 1.5 Check for back feeds from solar, batteries and generators that can keep a circuit live after the main switch is off. [Administrative] 1.6 If energized work cannot be avoided, use an energized work permit, a safety observer and insulated tools, following NFPA 70E. [Administrative] 1.7 Wear insulated gloves, arc-rated clothing and a face shield when testing or working near live parts. [PPE] 1.8 Release or block all stored energy before work: release the pressure in pipes, tanks and hoses, bleed hydraulics, release springs, lower loads. [Elimination] 1.9 Lock out and tag all energy sources with personal locks. [Engineering (guarding)] 1.10 Put mechanical blocks or props under raised parts like buckets, tipper bodies and doors. [Engineering] 1.11 Test that the system is dead and nothing can move before you start. [Administrative] 1.12 Follow the maker's procedure, for example for garage door and roller door springs. [Administrative] 1.13 Wear safety glasses and gloves. [PPE]	**Medium Rare / Fatality**	Site supervisor
2	Set up edge protection and roof access	Falling from a roof edge Falling from a ladder Rules: 29 CFR 1926 Subpart M; 29 CFR 1926 Subpart X	**Critical Likely / Fatality**	2.1 Do what you can from the ground or from a scaffold at the gutter line, for example pre-assemble parts on the ground. [Elimination] 2.2 Install edge protection or guardrails on all open roof edges before work starts. [Engineering (guarding)]	**Medium Unlikely / Serious injury**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				2.3 Use a perimeter scaffold with handrails and toe boards along the eaves where practical. [Engineering] 2.4 Where guardrails cannot be fitted, use fall restraint on certified roof anchors so workers cannot reach the edge. [Engineering] 2.5 Low-slope roofs: guardrails, safety nets, personal fall arrest, or a warning line combined with one of these or with a safety monitor (a safety monitor alone only on roofs 50 feet wide or less). Steep roofs: guardrails with toe boards, safety nets or personal fall arrest (29 CFR 1926.501(b)(10), (11)). [Administrative] 2.6 Use one safe, controlled access point and keep others off the roof. [Administrative] 2.7 Stop roof work in strong wind or rain, and when the roof is wet, icy or covered in dust or frost. [Administrative] 2.8 Wear a harness clipped to a rated anchor when using restraint or fall arrest, and soft-soled non-slip boots. [PPE] 2.9 Use a platform ladder, mobile scaffold or aerial lift for longer jobs instead of a straight ladder. [Substitution] 2.10 Use Type I, IA or IAA ladders in good condition. Tag and remove any damaged ladder. [Engineering] 2.11 Set extension ladders at a 4 to 1 angle on firm, level ground, secured, and reaching 3 feet above the landing. [Engineering] 2.12 Use ladders only for short, light work. Do not carry heavy or awkward loads up a ladder. [Administrative] 2.13 Keep three points of contact and your belt buckle between the stiles. Do not overreach. [Administrative] 2.14 Do not stand on the top three rungs of an extension ladder or the top step of a stepladder. [Administrative] 2.15 Check the ladder before each use: feet, rungs, side rails and locks. [Administrative] 2.16 Wear non-slip safety boots with clean soles. [PPE]		
3	Disconnect panels, covering connectors	Electric shock from live wiring Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	3.1 Electric shock from live wiring: see step 1 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
4	Lower panels by hoist and store them flat	Lifting and carrying heavy loads Falling tools and materials Glass handling and breakage Rules: 29 CFR 1926.501(c)	**High Likely / Recordable / lost time**	4.1 Plan to avoid carrying: have materials delivered, and old items picked up, as close as possible to where they are used. [Elimination] 4.2 Use lighter or smaller loads: order smaller bags and shorter lengths, and drain or break down old items before moving them. [Substitution] 4.3 Use trolleys, pallet jacks, hoists, vacuum lifters or plant instead of carrying by hand. [Engineering] 4.4 Use a two-person lift for anything heavy, long or awkward. Plan the route first and clear it. [Administrative] 4.5 Keep the load close, back straight and no twisting. Turn with your feet. [Administrative]	**Medium Unlikely / Serious injury**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				4.6 Barricade and sign the drop zone under overhead work so nobody walks beneath. [Engineering (guarding)] 4.7 Fit toe boards, kick plates and mesh screens on scaffolds and edges. [Engineering] 4.8 Use catch fans, debris netting or covered walkways where people pass below. [Engineering] 4.9 Tether hand tools when working at height. [Engineering] 4.10 Keep platforms tidy. Do not stack materials near edges or above toe board height. [Administrative] 4.11 Use suction lifters, glass trolleys or a glazing robot for large panes. [Engineering] 4.12 Store glass upright on racks and secure it. Never lay it flat or lean it loosely. [Engineering] 4.13 Use two or more people for large panes, and clear the carry route first. [Administrative] 4.14 Mark new glass with tape or stickers so nobody walks into it. [Administrative] 4.15 Clean up broken glass straight away into a marked container. [Administrative]		
5	Reinstall, test and recommission	Electric shock from live wiring Poor housekeeping and waste Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	5.1 Electric shock from live wiring: see step 1 for the full controls [Administrative] 5.2 Order materials to size and send packaging back where you can. [Elimination] 5.3 Put dumpsters and waste chutes close to the work. [Engineering] 5.4 Clean as you go, and do a full clean up at the end of each day. [Administrative] 5.5 Keep exits, stairs and walkways clear at all times. [Administrative] 5.6 Stack materials neatly on level ground, away from edges. [Administrative] 5.7 Wear gloves when handling waste. [PPE]	**Medium Rare / Fatality**	Site supervisor

Risk key: risk = likelihood x consequence on a 5 x 5 matrix. Low, Medium, High, Critical. Work must not start while the risk after controls is high or above. Controls are listed in order of the hierarchy of controls: Elimination, Substitution, Engineering (guarding), Engineering, Administrative, PPE.

3. PPE AND PERMITS

Required PPE	Permits and plans
Safety-toe boots (ASTM F2413) Personal fall arrest system (harness) Rubber insulating gloves Safety glasses (ANSI Z87.1) Arc flash PPE (NFPA 70E) Work gloves Sun protection (sunscreen, hat, long sleeves) Hard hat (ANSI Z89.1)	Lockout/tagout (1926.417) Written fall protection plan (only where guardrails, nets or personal fall arrest are not feasible, 1926.502(k))

Required PPE	Permits and plans
Cut-resistant gloves	

4. PLANT AND EQUIPMENT

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
Extension ladder		Inspected by a competent person for visible defects periodically and after any event that could affect safe use (29 CFR 1926.1053(b)(15))			
Supported scaffold	Erected under a competent person (29 CFR 1926.451)	Inspected by a competent person for visible defects before each work shift and after any occurrence that could affect its integrity (29 CFR 1926.451(f)(3))			
Electrical test meter		Rated for the voltage and category (CAT III or IV), inspected before each use, and checked on a known source before and after testing (NFPA 70E)			
Hand tools					

5. TRAINING REQUIRED FOR THIS WORK

- Qualified person training for work on or near exposed energized parts (29 CFR 1926.416, NFPA 70E)
- Fall protection training by a competent person, with a written certification record (29 CFR 1926.503)
- Ladder safety training by a competent person (29 CFR 1926.1060)

6. CREW TRAINING AND CERTIFICATIONS

Crew listed at sign-on below, with ticket and licence numbers.

7. EMERGENCY ARRANGEMENTS

Emergency number	911	**First aid kit**	In the work vehicle
Fire extinguisher	In the work vehicle	**Alarm and evacuation**	Shout for help and stop work. Make the area safe and go to the assembly point. Call the emergency number and send someone to meet the ambulance.
Reporting incidents	Report a fatality to OSHA within 8 hours, and an in-patient hospitalization, amputation or eye loss within 24 hours.		

8. MONITORING, REVIEW AND LEGAL BASIS

A competent person inspects the job site, materials and equipment before work each day and as conditions change (29 CFR 1926.20(b)(2)). Any time this JHA is revised, the affected crew is re-briefed and signs again.

Legal basis: OSH Act Section 5(a)(1) and 29 CFR 1926, Safety and Health Regulations for Construction (incl. 1926.20 and 1926.21). OSHA requires employers to find and fix hazards and to train workers on them. A JHA breaks the job into steps, lists the hazards in each step and the controls that protect the crew. General contractors often require one before you start.

Keep this JHA on site during the job, and keep it with the training and inspection records for at least 1 year after the job (longer if your state plan or general contractor requires it).

OSHA does not set a retention period for JHAs themselves.

9. REVISION HISTORY

Rev	Date	By	What changed
1	Nov 9, 2026		First issue

10. SIGN-OFF

	Name	Signature	Date	
Prepared by				
Supervisor				
General contractor review				Accepted for use: Yes / No

By signing below, each crew member confirms they were trained on the hazards and controls in this JHA before work started, and will follow it. Stop work and tell the supervisor if conditions change.

Name	Role / company	Tickets / licences	Signature	Date

Name	Role / company	Tickets / licences	Signature	Date