



Role: Solar PV Installer – Civil



This document provides a comprehensive set of technical, structural, and regulatory questions for the role of Solar PV Installer – Civil, ensuring thorough preparation for the position.

1. Role-Specific Questions

Q: What are the primary responsibilities of a Solar PV Installer – Civil?

A: Responsibilities include preparing the site for installation, constructing mounting structures, ensuring structural integrity, adhering to safety standards, and coordinating with other teams for successful solar PV system installation.

Q: How do you ensure the stability of mounting structures for solar panels?

A: Stability is ensured by conducting soil tests, using durable materials, following design specifications, and adhering to local building codes and wind load requirements.

Q: What safety precautions must be taken during the installation process?

A: Safety precautions include wearing protective gear, ensuring proper anchoring of structures, avoiding loose components, and adhering to industry safety standards.

2. Site Preparation

Q: What steps do you follow to prepare a site for solar PV installation?

A: Steps include clearing the site, conducting soil tests, leveling the ground, marking installation points, and ensuring accessibility for equipment and personnel.

Q: How do you handle uneven terrain during ground-mounted solar PV installations?

A: Uneven terrain is handled by leveling the ground, using adjustable mounting structures, and ensuring proper drainage to prevent erosion.

Q: What factors do you consider when selecting a site for solar PV installation?

A: Factors include solar exposure, shading, soil conditions, accessibility, and compliance with local regulations.

3. Structural Knowledge

Q: How do you ensure the structural integrity of rooftop solar installations?

A: Structural integrity is ensured by assessing the roof's load-bearing capacity, using certified mounting systems, and ensuring proper anchoring and alignment.

Q: What materials are commonly used for mounting structures in solar PV systems?

A: Common materials include aluminum, galvanized steel, and stainless steel due to their durability, corrosion resistance, and lightweight properties.

Q: How do you calculate the wind load for a solar PV mounting structure?

A: Wind load is calculated using local wind speed data, panel dimensions, and mounting height, ensuring compliance with building codes and standards.

4. Installation Process

Q: What tools are commonly used during the installation of solar PV systems?

A: Common tools include drills, wrenches, measuring tapes, levels, and torque tools for securing bolts and ensuring proper alignment.

Q: How do you ensure proper alignment of solar panels during installation?

A: Alignment is ensured by using levels, measuring tools, and following layout drawings to achieve optimal tilt and orientation for maximum energy production.

Q: What challenges do you face during rooftop solar PV installations, and how do you overcome them?

A: Challenges include limited space, structural constraints, and safety risks. These are overcome by conducting thorough assessments, using space-efficient designs, and adhering to safety protocols.

5. Maintenance & Troubleshooting

Q: How do you identify and resolve structural issues in solar PV installations?

A: Structural issues are identified through inspections for loose bolts, corrosion, or misalignment. Resolution involves tightening connections, replacing damaged components, and recalibrating the structure.

Q: What is the importance of regular maintenance for solar PV mounting structures?

A: Regular maintenance ensures durability, prevents corrosion, maintains alignment, and ensures the system's safety and performance over time.

Q: How do you handle a situation where the mounting structure is damaged after installation?

A: I would assess the extent of the damage, replace or repair affected components, and ensure the structure meets safety and performance standards.

6. Regulatory Compliance

Q: How do you ensure compliance with local building codes during installation?

A: Compliance is ensured by following design specifications, using certified materials, obtaining necessary permits, and adhering to structural and safety standards.

Q: What are the key documents required for solar PV installation approval?

A: Key documents include site assessment reports, structural drawings, soil test results, and compliance certificates for materials and installation.

Q: How do you handle changes in regulations that affect the installation process?

A: I stay informed about regulatory updates, adjust installation plans to meet new requirements, and communicate changes to stakeholders to ensure compliance.

7. Solar Domain Knowledge

Q: What are the advantages of ground-mounted solar PV systems over rooftop systems?

A: Ground-mounted systems offer easier access for maintenance, scalability, and flexibility in orientation and tilt angle, making them ideal for large-scale installations.

Q: How does shading affect the performance of solar PV systems?

A: Shading reduces energy production by blocking sunlight from reaching the panels. Proper site selection and panel placement minimize shading impacts.

Q: What is the importance of tilt angle in solar PV installations?

A: The tilt angle affects the amount of sunlight received by the panels. It is optimized based on the site's latitude to maximize energy production throughout the year.