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Solar renewable energy: Taking into account the practical consideration of installation

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Your company has decided to install a solar renewable energy solution to trim or eliminate its reliance on the grid for its electricity needs. That's great! Now it's time to prepare your site for installation. There are several practical considerations to keep in mind, including:

On-site safety: Worker safety both on the ground and on the roof is the first priority. A safety assessment, performed with the facility manager before the project begins, will determine what potential hazards exist and a detailed safety plan is created to mitigate all issues. On the ground, staging areas need to be accessed for owner, work vehicle and foot traffic. Rooftop work areas are protected with safety rails and flagging as required under OSHA standards. Ladder and loading zones as well as skylights and roof hatches are also flagged and protected with safety rails. All workers and machine operators should have OSHA training, and use fall protection procedures and personal protection equipment.

Shade: Shade and solar don't mix. Ideally, anything that shades your building's roof, including trees, should be removed. There are some technical solutions that can be used to address other issues—such as shade from abutting structures—but the best solution is to remove the shade if at all possible.

Building orientation and panel layout: Since the sun travels from East to West across the South, solar PV panels are typically fitted on roofs in a "southerly" fashion. The better the building is oriented to the South, the better the panel layout and larger the system production. Design layouts take this into consideration and make the best of the building's construction, including access to rooftop units or around special roofing or land configurations.

Roof inspection and protection: Usable space, support structures and surface integrity all need to be considered when approaching a new solar project. A structural engineer will be involved to approve placing the system on the roof, taking into account load factors and building codes. Before work begins, roofs will be inspected and optimal locations for loading zones and material storage will be determined. Both physical location on the roof and structural capacity of the specific areas on the roof are taken into consideration. Designated areas are protected with foam insulation sheets and plywood to protect roof membranes from construction activity.

Roof access: In most cases, the installation team will access rooftops via ladders to avoid traffic through interior spaces. If interior access through a roof hatch is required, coordination between the installation team, building owner and facilities manager will be finalized prior to construction.

Site security: Prior to mobilization to the site, a project manager will meet with property owners and facility managers to discuss access, security and specific requirements for workers to be on the property. Locations for material storage, portable bathroom facilities, dumpsters and worker parking will be decided. Hours of operation as well as any potential interruption to owner or tenant activities

will be outlined and scheduled in a collaboration between the installation team, building owner and facility manager.

Deploying a commercial solar energy solution provides innumerable benefits. The practical considerations above will help you get the most benefit from your system and ensure the safest, non-intrusive, and most secure environment possible while it's being installed.

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