Aerial Cable Support Systems

For more than 40 years, the Cambria County Association for the Blind and Handicapped has manufactured and sold cable rings and saddles for aerial cable support under the CAB brand as a way of providing employment services to persons living with disabilities. Utility-scale solar is an emerging market for aerial cable support systems, which are deployed around the world in industrial, utility and electrical applications. I reached out to Tim Wedding, a solar specialist at CAB Solar, to learn more about the company's messenger-wire cable support solutions.

Courtesy CAB Solar

Messenger-wire cable support CAB Solar has developed more than 25 unique designs for cable rings and saddles that safely support large bundles of string wires, dc and ac feeders, data, grounding conductors or other cables.

SP: What is an aerial cable support system and how is it deployed in large-scale solar applications?

TW: The CAB cabling system consists of a high-strength messenger wire that is securely attached to mid and end piers within the solar array. PVC-coated steel hangers attach to the messenger wire, and installers load cables into the individual carrier sections and securely lock them in place on the messenger wire. Our multicarrier designs safely separate cables and large bundles to meet *NEC* standards. The hangers are totally insulated and durable in highly corrosive environments. Our 80-mil PVC coating is flame retardant, has a high-dielectric grade and is UV stabilized for a long service life.

SP: What are the benefits of messenger wire systems compared to trenching or cable tray?

TW: In the last year alone, more than 1.5 GW of fixed-tilt and single-axis tracker ground-mount installations have used the CAB cabling system. It is proving to have many important advantages over trenching or using cable tray. The cabling system offers large cost savings on both labor and material. It provides more-predictable costs, with no cost overruns from flooded trenches, deep mud, hard rock, a high water table or other unforeseen construction problems. It also benefits the environment with less digging and soil runoff, less disruption to native or endangered species, and less impact on archaeological or sensitive sites. The CAB cabling system ideally suits brownfields, landfills and sites that are rocky, wet or have less than desirable ground conditions. Another important advantage for solar developers is that CAB Solar's system standardizes cable management across an entire portfolio of projects, which greatly reduces engineering costs.

SP: What are the most cost-effective applications for CAB Solar's cable rings and saddles?

TW: The most cost-effective use of our system is for installing multiple bundles of cables, such as PV wires, dc and ac feeders, grounding conductors or data cables, into one run. The CAB cabling system safely separates cables to meet the *NEC*, and installers are widely using it for east–west and north-south homeruns.

—Tim Wedding, CAB Solar

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