

Informational Document
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Tower Logistics, LLC has created a device aimed to assist technicians ascending and descending vertical structures. The Climb-Assist™ was originally developed for the wind industry to help personnel climb from the ground to the nacelle by off-setting a person's weight. The primary objective was to allow seasoned technicians to continue climbing the turbines without straining their legs and backs. Thus, more experienced people would be able to extend the number of years performing necessary troubleshooting that newer technicians did not have the skill base to perform. This is especially relevant now that the industry is expanding so rapidly that experienced technicians are difficult to find and needed more than ever before to train new technicians.

Through the research and development cycle the product took on new shapes and responsibilities. The 100 pound off-set weight over a pulley would accommodate a single climb. As the counter weight descended, the climber ascended, leaving the weight near ground level. Conversely, as the climber descended, the weight rose to the top. A winch was added to allow multiple users. By doing so, the winch can now be used to haul tools and spare parts up and down the tower relieving the technician of carrying the extra weight. In addition, the winch can be used for lowering and controlling an injured worker and therefore eliminating the problems associated with lowering the person on the outside of the wind turbine tower.

Bluetooth technology "ClimbTrack™" has been added to interface with the project SCADA system. When a person reaches the top of the tower, a signal is sent to the host computer stating someone is inside the nacelle. For safety concerns, this can be a "hard" fault to ensure the turbine is not re-started while someone is in the nacelle. Should a technician be injured in the nacelle and unable to call for help, the SCADA will identify the turbine where the technician is located.

Working in high temperature climates such as the California deserts and high humidity areas during the summer causes fatigue to set in much faster. Having your body weight off-set, reduces fatigue and related bodily injury, increases climbing speed and increases the number of climbs a person can perform in a day. This directly relates to fewer injuries, a decrease in Workman's Compensation claims and less turbine downtime. When installed during turbine erection, much less time is used in climbing, thereby reducing the number of man-hours and cost for project installation.

A one day instructional class is available to train attendees the techniques enabling them to safely use the Climb-Assist system and initiate appropriate rescue procedures. Upon completion and passing a test each person will receive a certificate that is valid for one year. Annual classes can be held to keep certificates current and workers safe.

The unit can be custom designed for any manufactured wind turbine and provides immediate cost benefits to developers, O&M providers and turbine manufacturers. There are many financing plans available, including one that matches payments with the wind season to make to make budgeting easy.