## Wind Energy Industry Applications WIND TURBINE MAINTENANCE

## Fall protection challenges

- Maintenance of wind turbines is often very dangerous because it's conducted at extreme height or in very confined areas.
- Tower Maintenance involves the use of the ladder system installed in the individual sections of the tower, or the installed service lift to access electrical conduits and structural sections. In either case, a full body harness will be required, and either a ladder safety system or a lanyard to anchor into the lift.
- Maintenance and repair of the control mechanisms for the blades will involve accessing the hub of the blades from the outside of the Nacelle. Specialized fall protection systems and anchorages will be required such as the Self Contained Vacuum Anchor.
- Blade cleaning involves specialist access equipment and rope access techniques, and can be extremely hazardous and dangerous without the correct equipment.
- Workers will be required to work all day in fall arrest equipment. Harnesses used will need to be comfortable, lightweight, and have multiple anchor points. In addition, the equipment should incorporate tool carrying accessories and be very durable and built-to-last.
- For added comfort and safety in these difficult to access areas, accessories such as the Hydration System and Trauma Relief Straps should be used.
- While working in the upper reaches of the tower, rescue can be almost impossible from the ground by conventional methods. Self rescue, personal evacuation and easy to use casualty evacuation equipment is a necessity for personnel working on wind turbines.



