



BEST PRACTICES IN WIND FARM SAFETY

The wind energy industry is the fastest-growing segment of renewable energy production. Both wind turbine installation and turbine maintenance are **high risk tasks** and safety considerations must be a main priority.

Turbine Installation:

- Ladder systems should have built-in vertical fall arrest systems.
- Worker harnesses should be comfortable, lightweight, and have multiple anchor points to last through long days on the job.
- Equipment should incorporate tool-carrying accessories to keep productivity high.
- Crews should use hydration systems that clip onto harnesses, easing the burden of working at heights and preventing dropped-object injuries.

Maintenance:

- Safety equipment will be the same as for tower installation (above).
- Maintenance and repair of control mechanisms for the blades will involve accessing the hub of blades from the outside of the nacelle. This dramatically increases the potential for a fall.
- Specialized fall protection equipment (vacuum anchor) will need to be used if a permanent anchor is not available.

Rescue:

A major difference in wind energy is the required rescue equipment since most wind farms are in remote areas.

- On-site rescue teams need rescue equipment that is quick to set up and easy to use.
- A rescue plan should be developed prior to beginning any work on a tower and should outline the common hazards (fire or complete mechanical shutdown).
- Workers must have proper rescue training, which should include a mixture of classroom and practical experience

OSHA has identified the turbine area as a permit-required confined space. As a result, workers should:

- Have confined space training.
- Utilize a portable gas monitor and test the atmosphere before entering a confined space. (Learn how to calibrate your instrument properly.)
- Make certain all of your crew's portable gas detectors are in working order.
- Always test for oxygen levels.
- Perform continuous testing for flammable and toxic gases upon entering the space.
- Utilize a unit that conveys alarm annunciation in multi-sensory ways, audibly, visually, and tactilely.