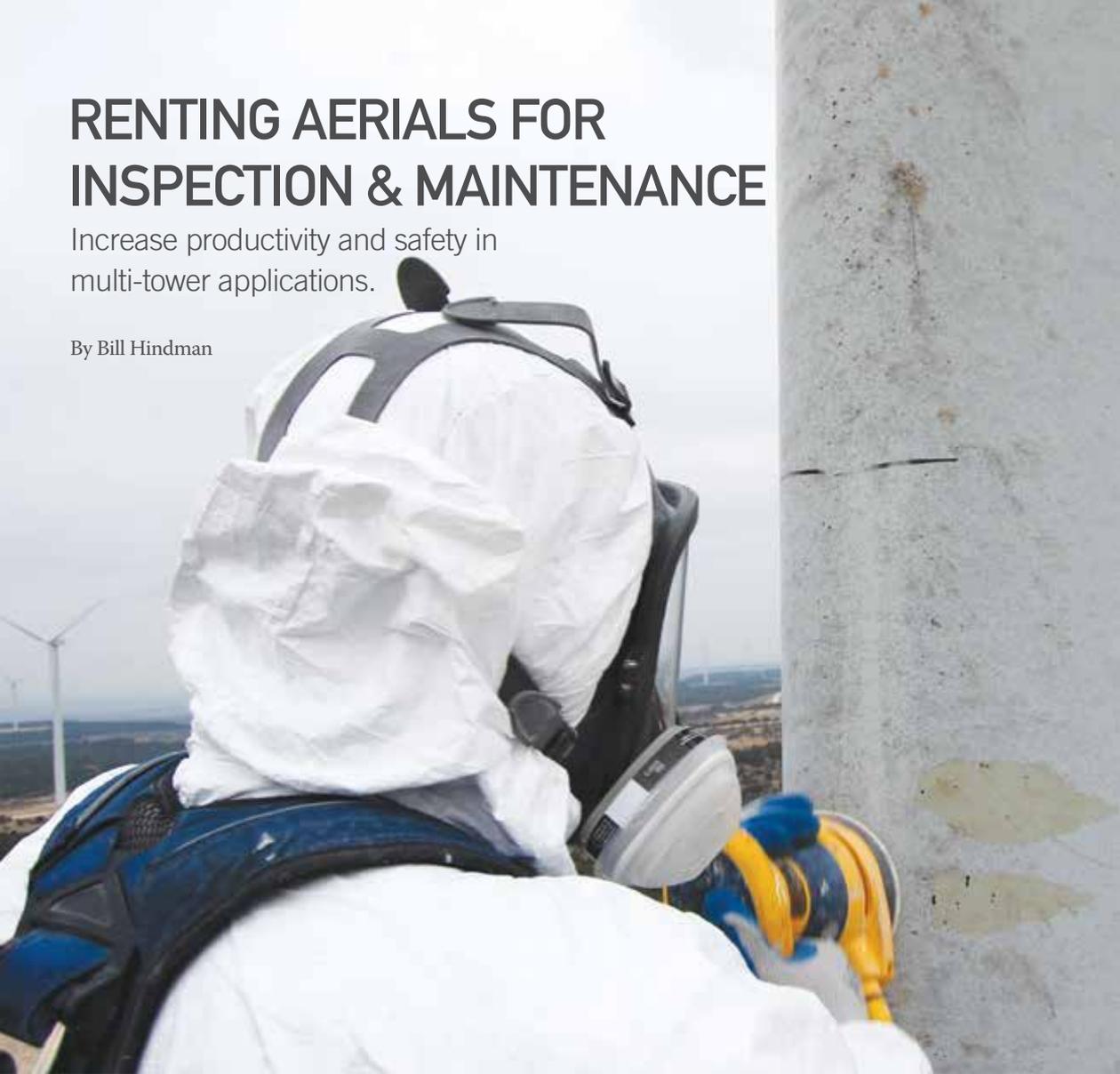


# RENTING AERIALS FOR INSPECTION & MAINTENANCE

Increase productivity and safety in multi-tower applications.

By Bill Hindman



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**WHEN BLADE MAINTENANCE** or tower inspection is required, there are a number of ways to get the work done. Some wind farm owners have maintenance contracts with the original installer of the turbine; some hire an outside maintenance company to do the work and others elect to perform the work themselves. One thing they all have in common however, is the need to keep the turbines operating at maximum efficiency. And to do that, they need to be regularly inspected and maintained.

A current trend among many wind farm owners is to establish a scheduled preventative maintenance program where they inspect and maintain all of the turbines and blades on a farm instead of waiting until an individual unit

needs repair. That way operating efficiency is maintained, shutdown time is minimized and the likelihood of major problems that require shut down for extended repair in the future is greatly reduced.

While some methods of accessing blades and towers like rappelling or rope access or suspended scaffolding are great for inspecting and maintaining one turbine, the time to setup and rig the equipment to work on just one turbine or blade each time, then reposition it at another turbine location can be quite time-consuming, and costly.

For applications requiring access to multiple tower locations, a truck-mounted aerial work platform is usually a better alternative. They are more productive



Photography courtesy TGM Wind Services



companies. The good news is that aerial work platforms can be rented from a number of companies in locations throughout the country. And, because of the machines' ability to be driven over the road, where machines are not available locally, they can be quickly transported to your site when needed.

Most rental companies provide their aerial rental customers with a dedicated driver/operator to transport, set-up and operate the machines on the job site. Some companies even offer certified technicians with experience in tower and blade inspection, documentation and repair to do the work, or work alongside other personnel provided by the wind farm operator or the turbine or blade manufacturer. Most rental companies will also offer operator training for other personnel to enable them to use the equipment safely.

Aerial work platforms feature a platform or "cage" mounted on a telescoping boom that is affixed to a turntable on the truck chassis. They are operated and positioned directly from the platform to give operating technicians a greater degree of control, and, unlike platforms suspended from overhead cables, they are not as susceptible to wind forces. Operators can quickly position themselves close to the blades and easily maintain that position while working.

Most aerials are also equipped with electrical, pneumatic, hydraulic, and water lines that run inside the telescoping boom from the chassis on the ground

and safer to use than most forms of overhead access and they are available with a wide variety of working heights and platform capacities. Bronto Skylift machines, for example, are available with working heights up to 340 feet and horizontal outreach to 102 feet. They also feature platform capacities up to 1,500 pounds so that technicians can conveniently carry their tools and parts directly to the overhead area.

Although aerial work platforms are ideal for wind farm applications, they are not inexpensive to purchase. A machine capable of reaching the top of 90-meter towers can cost as much as \$1 million or more, making them a huge investment for most farm operators or maintenance

to outlets in the elevated platform. These outlets allow technicians to operate powered tools and washers directly from the platform. This saves time and is much safer as it eliminates lines or hoses running down from the overhead platform to ground level and reduces the chance of accidental contact by workers or passing vehicles. In addition, because of the design of the platform, the extensive network of guardrails that surrounds the operator and technicians adds considerably to the safety of the operation.

Aerial platforms can be set up at or near the base of the turbine and, with the touch of a button, outriggers are automatically extended and positioned to level the machine. The operator and technician then enter the platform and the boom begins its ascent. The time from arrival at the site to being fully elevated at the overhead area is usually less than 15 minutes. Once set up, aerials are able to reach almost everywhere on the tower from a single location, they don't have to be constantly repositioned. On a multi-tower site, this can save considerable time and money in set-up costs alone.

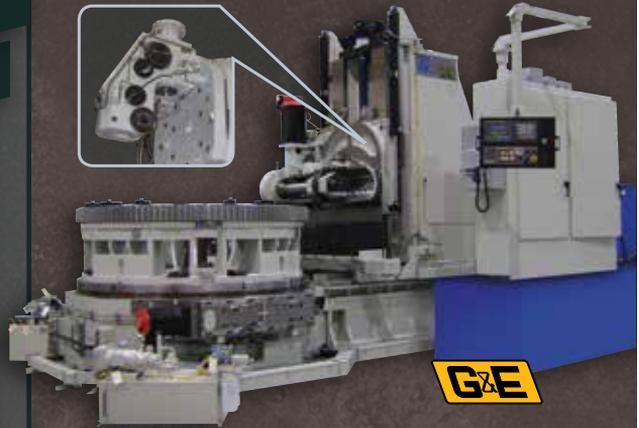
With higher productivity and increased safety, truck-mounted aerial work platforms are being used more and more to access overhead areas on wind farms. And, with the ability to rent or lease them from a wider variety of sources around the country, they are quickly becoming the preferred method for inspection and maintenance of wind turbines and blades nationwide. ✎



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