

# Laser Obstacle Remover Addresses Power Grid Challenges

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/EINPresswire.com/ -- Floating objects and tree branches interfering with high-voltage power lines have long posed significant challenges to global power grid maintenance. Developed by Sichuan RedCoast Base Intelligent Technology Co. in Sichuan Province, China, the laser obstacle remover offers a practical solution to enhance the safety and efficiency of power grid operations.

## Addressing a Persistent Problem

High-voltage lines frequently encounter issues from objects like kites, plastic bags, or dust-proof nets entangled due to wind, as well as tree branches growing too close to lines. Such obstructions increase the risk of short circuits, which can lead to widespread power outages. These disruptions impact residential life, halt industrial operations, and cause significant economic losses, often costing hundreds of millions of yuan. Traditional manual removal methods require workers to climb high-voltage structures, exposing them to substantial safety risks, including the potential for electric shock.

## A Special Solution

The laser obstacle remover utilizes high-energy laser beams to address



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these challenges. By emitting precise beams, the device generates intense heat to melt or vaporize materials like plastic films and kite strings, while carbonizing and breaking tree branches. With an operational range extending hundreds of meters, the technology allows operators to work safely from the ground, eliminating the need to approach hazardous high-voltage lines.

This approach significantly improves efficiency compared to manual methods. Clearing an obstruction typically takes seconds to minutes, streamlining maintenance processes and reducing downtime. For instance, in a recent case in Sichuan, a dust-proof net entangled on a high-voltage line was removed in seconds. The operator, positioned safely on the ground, aimed the laser, causing the net to decompose and detach rapidly. Similarly, the device effectively trims tree branches, cutting smaller ones instantly and larger ones with brief, continuous irradiation.

#### Broad Applications and Impact

The laser obstacle remover enhances the stability of power grid operations by minimizing risks and improving response times. Its applications extend beyond power grids, offering potential in firefighting, emergency rescue, de-icing, and post-disaster cleanup, such as cutting through debris or accessing structures.

Feedback from industry professionals highlights the technology's role in modernizing maintenance practices. "The laser obstacle remover has transformed how grid maintenance is approached, making it safer and faster," said a power grid technician in Chengdu. The device's precision and remote operation have been praised for reducing operational hazards while maintaining reliability.



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## Supporting a Stable Future

The development of the laser obstacle remover reflects a commitment to addressing global infrastructure challenges. As adoption of this technology grows, its potential to enhance power grid reliability and support diverse applications continues to expand, contributing to safer and more efficient systems worldwide.

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