

Wireless Transmission Enhances

Security with **Solar**
Power in Bahrain

A tall, slender metal pole stands on a rocky, flat landscape under a clear sky. At the top of the pole is a small, dark rectangular box, likely the solar hybrid power system mentioned in the text. The pole is positioned on the right side of the image, with a large blue and red graphic element on the left.

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Introduction

Wavesight delivered vertically mounted solar hybrid power systems to support mission-critical security and communication equipment on a remote reclaimed island site in Bahrain. Partnering with Delta Safety & Security Services, the project enabled real-time wireless video transmission and site monitoring from two kilometers away on the mainland, using solar energy to provide reliable, off-grid power in challenging environmental conditions.

Challenge

The primary challenge was to provide uninterrupted, stable power to CCTV cameras and radios in an environment characterized by blowing sand, high humidity, and strong winds. As traditional power sources were impractical for the remote reclaimed island site, a scalable off-grid solar solution was needed that could be securely deployed on typical poles to ensure constant surveillance and communication without frequent maintenance or system failures.

Solution

Wavesight deployed six integrated solar hybrid systems, each powering one or two cameras and a radio on vertical poles. These systems were designed for fast deployment, durability, and reliable operation in harsh weather. The solar panels vertically mounted within protective cabinets provided protection while maximizing energy capture in limited space. The wireless transmission equipment streamed video and data continuously from the island to the mainland monitoring center, ensuring seamless, long-distance communication.

Results & Benefits

- Achieved uninterrupted 24/7 surveillance and communication despite extreme desert environmental conditions.
- Reduced installation and maintenance costs by using a modular solar hybrid power solution suited for remote deployment.
- Enabled real-time monitoring and control over construction activities from the mainland, improving site security and operational oversight.
- Provided scalable infrastructure adaptable for future expansions or additional security deployments.
- Delivered a reliable and durable solar power system proven effective under harsh climate challenges.

Testimonial

Rajinder Singh, General Manager at Delta Safety & Security Services – Bahrain, states:

"Wavesight Solar Systems and Radios proved their quality by performing perfectly in harsh environments where blowing sand, high winds, and humidity would damage inferior products in less than a month. Thank you for providing quality products and your technical team for their kind support during the installation. We look forward to more projects with Wavesight."

Interested in scalable, reliable solar power solutions for remote and mission-critical security applications?