

Reducing cost and alleviating unsafe conditions

Deterring Birds in Hazardous Off-Grid Locations in the Middle East

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Summary

Roosting seabirds pose a hazard for unmanned offshore installations. While bird deterrence systems exist, they must continually operate without access to onboard power. JCE Group's Ex Solar Power Pod (SPP) uses Morningstar products to reliably electrify these systems in dangerous environments.

Situation

One of the many hazards unmanned offshore installations face in daily operation is that seabirds like to use them for roosting. Not only does the waste the birds produce create a toxic atmosphere, but bird excrement is also corrosive which can cause chronic shutdowns through material failures. Sending out teams of cleaners to deal with the problem—either by workboat or helicopter—on a regular basis is both risky and expensive. Among other things, cleaning teams must wear breathing apparatus and special clothing to protect against this toxic residue while working high above the water.

Bird deterrence systems are a solution, but implementing them is a challenge since they require a continuous source of electricity to operate. That means a local source of power and, based on the remote isolation of this type of installation, one using renewable energy since regular fueling and maintenance are out of the question. In addition, the platforms tend to be "live" and in a hazardous area state, at all times.

Project

Two decades ago JCE Group successfully certified the world's first Ex Solar Power Pod (SPP) consisting of a PV module, battery, and a solar controller on a steel frame. Capable of powering bird deterrent devices, these SSPs are designed to continuously operate in hazardous locations and in the presence of flammable gasses, ATEX-approved for Zone 1 and 2 areas under the "HazLoc" designation system. These Pods were adopted for this bird scaring project but are also used to operate navigation aids, alarm systems, gas detection, camera surveillance, ship-to-shore communications, and more.

The success of the SSP approach prompted JCE to create a dedicated renewable energy division. Today, through JCE Energy, SPPs continue to provide solutions. For example, in 2000, JCE installed SPPs with 200W of solar 12V/24V, 120Ah battery banks for a client with platforms in the Persian Gulf off the shore of Doha. Thousands of birds had been using the platforms on the water for breeding, creating considerable damage by causing severe erosion of cables, equipment, and structures, along with continual shutdowns of power systems.



Solution

JCE shipped components to Doha where the client's staff assembled SPPs in warehouses before transporting them to the multiple platforms. This solution proved to be a huge success. The birds sought alternative roosting sites, reducing costs and alleviating unsafe conditions for on-site employees. JCE's SPPs have thrived in extreme environments including desert, jungle, offshore, and sub-zero climates, with Morningstar SunSaver™ SS-MPPT-15L controllers on-board.

"JCE continues to use Morningstar components due to the company's excellent reputation which precedes them alongside their ability to guarantee both great service and assistance globally," said Lukas Geider, Business Development Assistant, JCE Group.