Project reference

Wind Farm

System Integration
Dessin Electrónica Ltda.
(Chile)

Technology
IP-based video network

Market
Critical Infrastructure

Challenge
Design and deploy a video
surveillance system for two
new wind farms in Los Vilos,
Chile

Solution
Siqura IP PTZ dome cameras
Siqura S series decoders
Siqura VMS Pro
Siqura i-NVR
Siqura Surveillance
Controller

Securing economic expansion

Chile is without a doubt one of the largest
exporters of copper in the world, something
that accounts for its strong trade relations with
the emerging economic superpower, China.
Despite these rich mineral deposits and
promising dealings, Chile has a limited supply
of energy resources and has therefore taken a
number progressive steps in support of
renewable energy sources. Consequently, wind
farms are popping up all over the country.
Naturally ensuing this development are the
means to monitor and secure these highly
important areas.

Near the town of Los Vilos, two wind farms
have recently been built. They share a video
surveillance system from the systems integrator,
Dessin Electrónica Ltda., and TKH Security
Solutions USA, manufacturer of advanced
global video surveillance solutions. This new
surveillance system includes an array of
cameras, sensors, communication systems,
viewing and management workstations, and
network video recorders (NVR). It is intended to
monitor the wind turbines and manage the
farm's perimeter for security purposes.

Centralized oversight
Using Siqura high-speed PTZ IP dome cameras
to monitor every two or three wind turbines,
video streams are sent to a central control
room. The system is configured with video
motion detection, and motion sensors are
connected to the cameras' input/output ports.
This makes it possible to alert operators in the
control room of unusual or suspicious
occurrences.

TKH GROUP SIQURA®

Siqura cameras are also mounted at various points along the perimeter of the wind farm terrains, including the main entrances and visitor viewing areas. In addition to image material, audio streams are sent to Siqura S-60 D decoders, allowing for public announcements to be made over an intercom system.

From the control center, security personnel keep a close eye on the situation and take action when necessary through the video management system, Siqura VMS Pro.

Siqura VMS Pro is a multiserver, multi- user IP surveillance management system used for monitoring real-time and recorded video, audio, and text data, and to control cameras and I/O devices. The software supports surveillance systems consisting of digital IP cameras, video servers, and recorders in IP surveillance networks. Through the intelligent search options and event handling included in Siqura VMS Pro, relevant recordings will be saved on one of two hardware network video recorders (Siqura i-NVR).

Via this centralized VMS system, operators can view live video, search recordings, and manage intrusion, access, and deterrence controls. Ultimately, this enables personnel to ensure the immediate safety of the wind farm and its employees and visitors, as well as to use video images for forensic verification if required.

Ensuring a successful surveillance solution

With such a multifaceted system, engineers from Dessin and TKH Security Solutions USA did extensive testing throughout the design and implementation stages of the project to ensure its success. The initial testing was carried out at Dessin's own testing facilities and entailed a demonstration of the system to the end-user. Thereafter, Dessin and TKH Security Solutions USA tested the system at the wind farms upon implementation, giving the systems integrator and manufacturer the opportunity to fine tune the network's configuration. The ultimate solution was tested in a final demonstration for the end-user's management team, with gratifying results.

Due to the success of this surveillance network, it is being replicated in other important power and distribution plants throughout Chile.

Powering progress

In a country rife with minerals and natural resources, having enough energy is critical to fuel economic growth. However, in order to have enough energy, Chile has had to get innovative. As a result, alternative sources of energy are becoming increasingly popular and wind power is now widespread throughout this Andean nation.

Ensuring the safety and security of these wind farms is therefore vital to progress. Through working together, companies like TKH Security Solutions USA and Dessin are able to help protect the people and property at these modern power plants, guaranteeing that the economy is free to grow and expand.