Video Analytics Success in Critical Infrastructures: Power Plants

DAVANTIS

Success of Video Analytics in Power Plants

Like all critical infrastructures, power stations require high security levels to prevent incidents from interference with electricity production

Perimeter security is the key. Intelligent video analytics systems based on artificial intelligence (deep learning) algorithms ensure the **highest levels of precision and effectiveness for early detection of intruders, objects, and other security incidents.**

So, how do you design optimal CCTV perimeter protection systems for nuclear plants and electricity plants?

Power plants tend to be in well-marked areas with irregular perimeters in either urban areas or far away from big cities. That is why it is essential to have a security system adapted to the specific conditions to ensure precise, efficient detection to prevent false alarms.

Given the nature of the dangers to which nuclear and other power plants are exposed, they must be protected by maximum security systems. Among the main threats are: 1) terrorism, where detecting intruders and objects in perimeter control areas is vital; 2) sabotage and vandalism for which it is essential to detect and deter possible breaches of the perimeter to prevent unwanted visitors from interfering with energy supplies to the city; and, lastly, 3) theft, requiring an effective means of detecting attempts to steal property.

An efficient video analytics system can deal with all these threats while adapting to complex sites, avoiding blind areas which can be vulnerable to intruders.

Nipping attempted break-ins in the bud is an important requirement for early detection, and so is tracking the movements of unwanted visitors to get the most from security protocols.

Maximum detection with minimum false alarms

Reducing false alarm rates is essential in critical facilities to optimise costs and improve video surveillance accuracy. DFUSION combines algorithms that merge appearance and movement in images to improve the precision of detection to minimise false alarms and avoid non-detections.

This fusion technology, coupled with 24/7 monitoring and integration of our systems with CMS and

PSIM guarantees strategic synergies that give security guards real-time access to images so that they can decide whether to activate deterrents or send patrols to the site of the incident.

Thanks to our systems, deterrent measures can be activated instantly to stop vandals and thieves in their tracks. What is more, we reduce false positives triggered by animals in rural areas and extreme weather conditions, raising security levels with smart detection management.

The use of analogue and IP thermal cameras is crucial in systems that need to guarantee high security standards. IP CCTV cameras are particularly useful for protecting sites with large perimeters.

DFUSION integrates seamlessly with all types of cameras for optimal image analysis.

Our video analytics systems do not need high quality images because our enormous database enables us to analyse an enormous number of images per second with high precision.

Adaptability and Learning

The effectiveness of a security installation depends on the adaptability, integration and learning capacity of the video analytics systems. In this case, getting started with DFUSION is quick and easy, with guaranteed integration with all makes of hardware and alarm management software while ensuring precise detection in even highly demanding circumstances and at long distances.

Our software's learning capacity coupled with our enormous database thoroughly analyses all types of images and activates alerts efficiently.

What is more, our solutions make it possible to enable advanced functions based on DFUSION technology to ensure high efficiency and quality standards in perimeter video surveillance, such as the case of nuclear and other power stations.

Adaptation to the environment plus latest generation algorithms for detection of intruders, objects and vehicles in real time make DFUSION an optimal perimeter security option.

Nuclear and other power stations protected with DAVANTIS video analytics

DAVANTIS has been managing perimeter security at nuclear and other types of power stations both in Spain and abroad for years. Our intelligent video analytics system achieves the highest standards of efficiency and precision in critical infrastructures.

Internationally endorsed by the Centre for the Protection of National Infrastructure (CPNI) based on their efficiency and quality, DAVANTIS solutions are supported by a team of video analytics and critical infrastructure experts to advise clients throughout the project, from design and installation to maintenance.

CPNI®
Centre for the Protection of National Infrastructure

Ascó Nuclear Plant

Spain

This nuclear power station is on the bank of the River Ebro in Ascó, Tarragona, Catalonia on a 13,000-square-metre site. The plant has two reactors and is surrounded by a storage area.

Scottish Power

UK

It supplies millions of homes and businesses in the UK with power from plants in specific areas of the country. Many of its power plants have challenging perimeters, which is why the company has chosen to protect its assets with our video analytics system.

Safont Hydroelectric Power Station

Spain

This 1,120-kW power station is on the River Tajo in Toledo and has two Kaplan generators. Its location, 2.5 metre waterfall and nominal flow of 32 m^3 per second mean that this power station requires an intelligent perimeter security system such as our video analysis solutions.

Acciona Energy

Spain

A pioneer in renewable energies, with more than 14,000 MW installed to meet its goals of producing 100% renewable energy and avoiding the emission of tonnes of COÐ into the atmosphere. Its sustainable expansion in the territory requires video surveillance systems with smart video analytics to detect intruders, objects, and incidents capable of interfering with the normal supply of electricity to society.

ENEL-Endesa

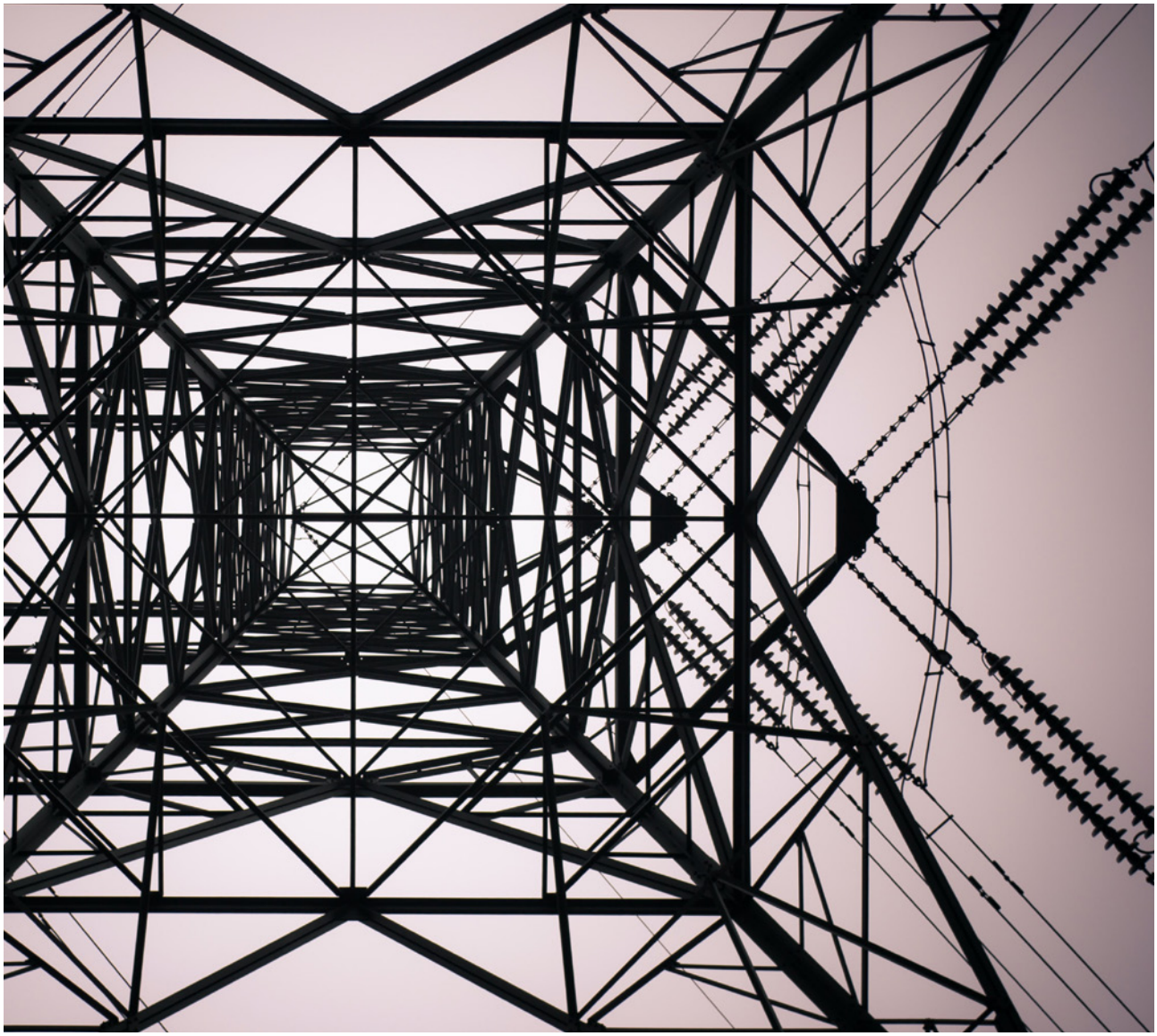
Spain

Electrical substations and solar plants for ENEL-Endesa. For years, DAVANTIS video analytics systems have been taking care of perimeter security at electrical substations and nuclear facilities for ENEL-Endesa in the provinces of Ibiza, Huelva, Badajoz, Cuenca, Cáceres, Málaga, among others. Reducing false alarms and the customisable settings of our technology provide efficient control and protection of these facilities.

NATURGY

Spain

Tres Termes-Tarragona and substations in Almeria are protected by latest generation technology to analyse images from perimeter CCTV cameras. This guarantees activation of deterrents, real-time alarm management and optimised costs after integration of our video analytics technology with ARC, PSIM and VMS platforms.



EGAT

Thailand

Thailand's main state electricity company, attached to the Ministry of Energy (EGAT) trusts DAVANTIS smart technology to manage perimeter security at its energy plants in different areas of the country.

DAVANTIS TECHNOLOGIES SL

Barcelona · Spain
Madrid · Spain
Nice · France
Luedinghausen · Germany
Bogota · Colombia
Singapore

DAVANTIS TECHNOLOGIES INC

Washington DC · USA

—

info@davantis.com
www.davantis.com