



Energy Facilities & Infrastructures Intelligent Vehicle Screening



Background

The greatest challenge the energy sector faces today is how to meet the continuously changing risk factors and addressing all of the necessary security aspects. Considering their unique infrastructure, expensive and sensitive materials onboard, and sometimes even classified national assets, energy facilities will always be subject to varied security threats.

With hundreds of oil refineries, nuclear power plants, research reactors and fuel cycle facilities in operation worldwide, preventing certain materials from falling into the hands of adversaries seeking to steal or even harm the station operators is the top priority of the corporations' security teams.

The overwhelming majority of attacks (74%) on energy targets between 2010 and 2014 were carried out using explosive devices, while facility & infrastructure attacks, including arson and sabotage tactics, were the second most common (CEI Security Stakeholder Group Manifest).

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In April 2013, terrorists used high-powered rifles to destroy several transformers at a transmission substation in California in an incident that incurred more than \$15 million in damages and required nearly a month to restore.

Still, energy plants are among North America's most protected private sector facilities. They are extremely robust structures that, by design and construction, are very challenging to penetrate. These structures, a well-trained security force and strict access controls for operators and visitors provide a robust layer-upon-layer comprehensive security network.

The security level increases as one gets closer to the "owner-controlled area," which is fenced and secured by advanced systems and well-armed security officers. This security ring typically shields the reactor, the control room, the used fuel pool and the central security alarm stations.

UVEYE Facilitates:

- Automatic detection of illicit materials or unauthorized access on the first pass
- High-quality scanned images
- Smart Compare capabilities for the inspection of recurring vehicles
- Fraud prevention tools backed by a unique Vehicle ID
- Full integration to barriers, bollards and access control systems
- COVID-19 compatible: driver and passenger fever detection capabilities

Introducing UVeye - Intelligent Vehicle Screening for Energy Infrastructures

Access to the owner-controlled area should be limited and protected by an automated access control system that integrates with the alarmed security doors and response system connected to federal or local law enforcement agencies, who can assist in the event of an attack.

Helios UVIS by UVeye helps ensure that all measures are taken to control vehicles' access to sensitive energy facilities and protect them from such risks.

It is designed to detect illicit materials being smuggled in, prevent theft, and thwart unauthorized access or other malicious acts in and around the secured facility.

Offering single- or multi-lane units as well as stationary or mobile units, UVeye's advanced deep learning algorithms were developed through training with millions of vehicles and allow UVeye to offer its first pass solution, UV Inspect.

Built on a truly intimate understanding of what a wide range of vehicles are supposed to look like in various environmental conditions, UV Inspect can be used for vehicles that have not been previously scanned by a system. UVeye is the only under-vehicle inspection system (UVIS or UVSS) vendor to offer a verified first-pass solution that significantly increases security teams' effectiveness.

Another key feature from Helios is called UV Compare, which enables it to recognize previously scanned vehicles by their license plate or unique undercarriage fingerprint ID and compare it to previous scans.

Individuals granted access to the facility or protected area, whether they are employees, contractors or visitors, become part of this database. This feature can also help detect tiny objects such as paper bags, phones, miniature hard disks and other contraband.

Keeping the Confidential Materials Sealed Tight

Due to their complex environment and sensitive information, energy sites are a target for technology and data theft scenarios. The physical protection of energy plants and associated facilities must include vehicle access point inspection to ensure these

security systems' effectiveness against defined risk factors by UVeye's tailored security level, answering a wide range of security requirements.

Durable and Works in Extreme Conditions

Given the industry's unique work conditions and the varied types of vehicles accessing these facilities, Helios can withstand up to 40,000 pounds (20 tons) per axle, meaning that it will survive being driven over by even massive vehicles like trucks or SUVs.

Helios is also designed to respond to weather variation, such as daily changes in temperature, storms and weather hazards. It is fully operational at temperatures between 68°F and 104°F (20° / 40° Celsius) and is IP 68/54 compliant, meaning it offers full protection against sand, dust and rain.

Can Help Combat COVID-19

UVeye's built-in thermal sensor can detect the body temperatures of the passengers in vehicles entering the site's access roads, assuring the safety of everyone in and around the facility.



The Impact — Multi-Layer Access Control Security

UVeye fully supports third-party integration and provides multiple layers of security for any facility.

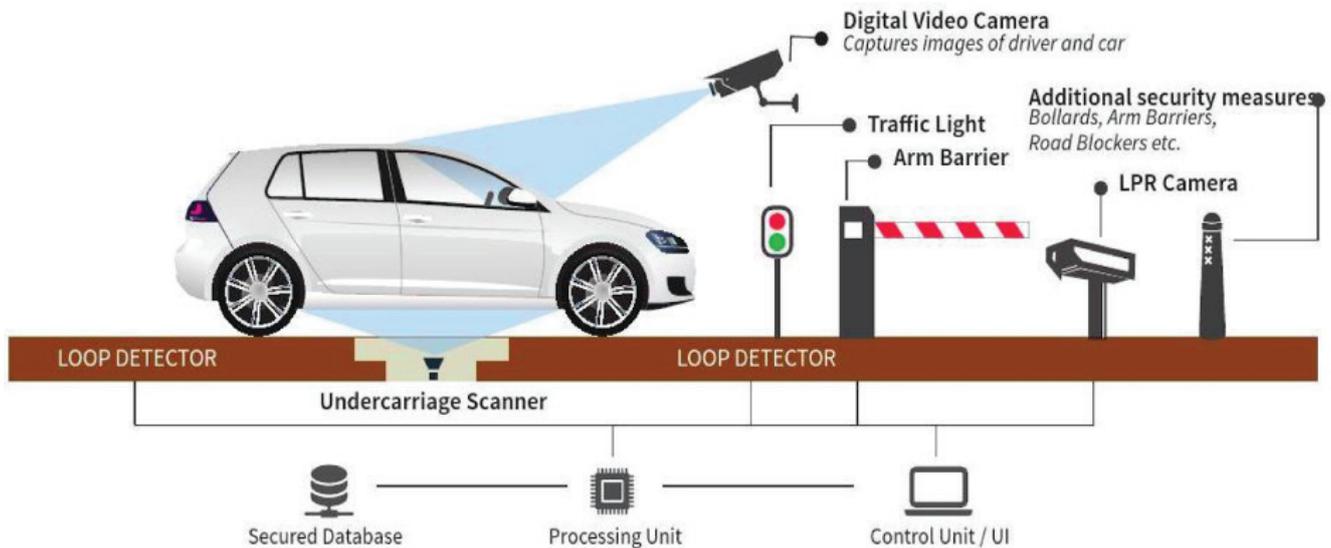
Examples of integrations made in the past:

ALPR system

Arm barriers/bollards

Face detection/recognition

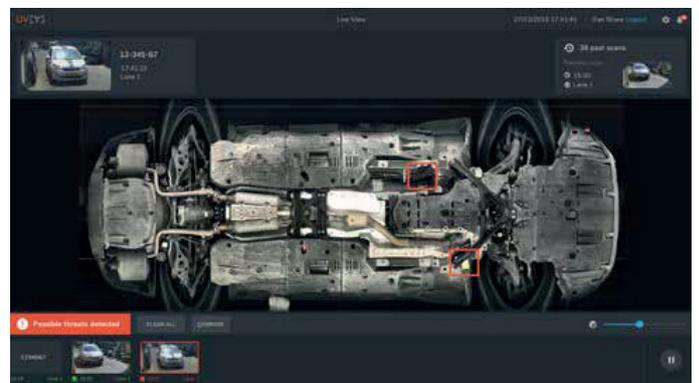
VMS (video management system)



Central System for Maintaining Data

Integrating to the centralized server provides the capability of connecting multiple systems or lanes across different sites while enabling central management and control via one screen.

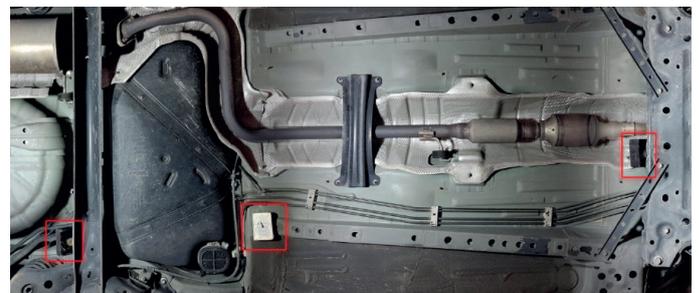
The centralized management system allows the client to access multiple systems and manage the other users and historical data.



Conclusion

The undercarriage is one of the most critical parts of the vehicle to inspect and one of the most challenging areas to examine. Helios is the perfect solution to prevent any weapons or other illegal and dangerous items from entering energy facilities.

Integrating it with additional security and access control systems can provide a multi-layered approach to tighten the entry and exit points to any sensitive site while keeping personnel and data safe.



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