

POWER DELIVERY

Substation Physical Security



POWER has designed a variety of protective perimeter barriers, including block wall fencing with surveillance cameras and motion detectors.

FLEXIBLE SOLUTIONS

We offer a broad range of substation physical security services:

- > Risk assessment studies
- > Independent risk assessment verification
- > Threat evaluations
- > Develop detailed facility security plans to deter, detect and delay
- > Design of security features
- > Review of security plans
- > Threat vector ballistics line of sight studies



Integrated Solutions to Address Emerging Threats

Substation physical security is a critical part of substation planning, design and operation and is now a requirement in NERC standards. POWER can help identify, evaluate and design physical security measures for all substations. We bring vast substation design, deep system study, security, community outreach and cybersecurity experience to help you meet regulatory mandates and protect your critical assets.

NERC Compliance and Other Needs

POWER can perform risk assessments, mitigations and evaluations for local threat environments at both existing substations and planned facilities. We are experts in the customizable techniques and equipment that will

help deter, detect and delay attacks at your facility. Whether you want to enhance site selection, meet regulatory requirements or fortify physical security, POWER can help you address evolving threats with cost-effective solutions.

Defense in Depth

POWER has the full multi-disciplinary capabilities to evaluate active and passive security options for each unique site, no matter how complex. Site selection, along with carefully selected perimeter defenses and access road designs can deter bad actors. Detection systems, including video analytics and motion detectors, can be tailored to each site. Access controls on gates and doors can deny unauthorized entry. A complete security design can delay intruders while responders are en route to the site.

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POWER has full multi-discipline capabilities to design the protection, detection and surveillance systems necessary to implement your security goals, no matter the complexity.

REGULATORY COMPLIANCE

We help clients comply with the following physical security-related requirements and standards:

- > NERC CIP-006
- > NERC CIP-014
- > IEEE draft Guide P1402
- > NRC 10 CFR Part 73

Project Highlights

Northern California Power Agency

Identified assets to be upgraded, performed assessments and developed cost estimates for improvements required to bring generation plants, headquarters building and related assets up to NERC CIP-006 physical security standards.

Exelon

Designed a new camera and security lighting system, fences and isolation zones, automatic vehicle barriers, a new security-related communications system, new bullet-resistant enclosures, and defensive firing positions at the Calvert Cliffs nuclear plant in accordance with Nuclear Regulatory Commission requirements.

Independent Transmission Company

Prepared performance specifications for physical security of the Neptune HVDC converter station and reviewed and approved subcontractor submittals.

Homer Electric Association

Provided design services for a new substation. This included a new state-of-the-art security camera system for intrusion alarming and video recording.

Clallam County PUD

Assessed the security impact of changes to a wide area communications network. Evaluated physical security, redundancy, network topology, media interactions, encryption, latency of security measures and protocols.

City of Burbank

Defined critical infrastructure protection (CIP) requirements for inclusion in the EPC specification for a new substation. Security measures detailed included physical security, cyber security, monitoring, and access control.

Tacoma Power

Assisted with preparing a grant proposal for Smart Grid funding from the U.S. Department of Energy. Evaluated security requirements for the grant, assessed TPU's proposed design for security vulnerabilities, and researched required measures to defeat exploits based on identified vulnerabilities.