

Career Pathway Spotlight

Discover a Career as a Cybersecurity Analyst



Discover your career in energy!

Cybersecurity Analysts protect the systems that keep the power on — defending the networks, control systems, and data that energy companies depend on to operate safely and reliably.

Control Systems & Critical Infrastructure Protection

Energy infrastructure runs on interconnected control systems that manage everything from power plant equipment to pipeline monitoring. Cybersecurity Analysts protect these systems from attacks that could disrupt operations, damage equipment, or threaten public safety.

Enterprise Network & Cloud Security

Energy companies rely on corporate networks, cloud platforms, and connected devices to manage operations and serve customers. Cybersecurity Analysts defend these systems against threats, ensure data is protected, and keep business operations running without interruption.

Regulatory Compliance & Risk Management

Operating critical infrastructure means meeting strict federal cybersecurity standards. Cybersecurity Analysts help energy companies assess their risks, build programs that meet regulatory requirements, and demonstrate compliance to auditors and regulators.

CAREER PATH

Start with:

- » High school diploma or GED
- » Curiosity about technology, networks, and how systems work

Get Educated:

- » Bachelor's degree in cybersecurity, information technology, or computer science
- » Entry-level security certification (such as CompTIA Security+)
- » Workforce development programs, community college courses, or self-study pathways

Specialize With:

Knowledge in:

- » Network and cloud security
- » Industrial control systems and operational technology security
- » Threat detection and incident response
- » Risk management and compliance
- » Security architecture and design

OCCUPATIONAL SKILLS

- » Monitor networks and control systems for unusual activity or security threats
- » Investigate security incidents and coordinate response to minimize impact
- » Assess vulnerabilities in systems and recommend improvements
- » Develop and enforce security policies, procedures, and access controls
- » Ensure systems and operations meet federal and industry security requirements
- » Collaborate with engineering, operations, and technology teams to build security into new projects
- » Prepare reports and communicate security risks clearly to leadership

BENEFITS

These energy industry careers offer:

- » Competitive salaries with strong demand across the energy sector
- » Employer-sponsored health, dental, and vision insurance
- » 401(k) or pension retirement plans
- » Support for professional certifications and continuing education
- » Stable, mission-critical work protecting essential infrastructure
- » Career growth into security leadership, architecture, or consulting roles

What Might You Do As A Cybersecurity Analyst?

ENTRY LEVEL

1-4 years

What you will do:

- » Monitor security dashboards and alert systems for potential threats or suspicious activity
- » Investigate and document security incidents under the guidance of senior analysts
- » Assist with vulnerability assessments and security testing of systems and networks
- » Support the rollout of security policies, procedures, and access controls
- » Help deliver security awareness training to employees across the organization
- » Maintain logs and prepare written reports on security events and findings

MID- CAREER

5-8 years

- » Lead investigations into security incidents and coordinate response across teams
- » Conduct risk assessments and identify vulnerabilities across business and operational systems
- » Develop and update security policies, response playbooks, and training programs
- » Advise project teams on how to design and deploy new systems securely
- » Support compliance programs and help prepare for regulatory audits and reviews
- » Mentor entry-level analysts and contribute to team skill development

EXPERIENCED

8+ years

- » Lead enterprise-wide cybersecurity strategy and programs across energy operations
- » Oversee security design decisions for new infrastructure, grid systems, and digital technologies
- » Direct major incident response efforts and coordinate with federal agencies and partner organizations
- » Ensure ongoing compliance with applicable federal and industry cybersecurity regulations
- » Build and lead security teams, setting standards and developing the next generation of talent
- » Advise executive leadership on cyber risk, investment priorities, and organizational resilience

What knowledge, skills and abilities will you need to succeed?

- » Basic understanding of computer networking, operating systems, and cybersecurity principles
- » Familiarity with security monitoring tools and common types of cyber threats
- » Attention to detail and analytical thinking for spotting unusual patterns
- » Strong written communication skills for documenting incidents and findings clearly
- » Come to work on time and prepared
- » Eagerness to learn and stay current as cyber threats and technologies evolve

- » Working knowledge of cybersecurity frameworks and the regulations that apply to energy infrastructure
- » Experience investigating and containing security incidents in complex environments
- » Ability to assess risk and explain findings clearly to both technical and non-technical audiences
- » Understanding of how to secure both business technology systems and industrial control environments
- » Project coordination skills for driving security improvements across teams and departments
- » Intermediate security certifications such as Certified Information Systems Security Professional or equivalent

- » Deep experience securing both business technology and industrial control environments in the energy sector
- » Strong leadership and team development capabilities
- » Ability to connect cybersecurity strategy to business goals and regulatory obligations
- » Advanced knowledge of threat intelligence, security design, and enterprise risk management
- » Comfort engaging with federal regulators, external auditors, and executive stakeholders
- » Established reputation as a subject matter expert in energy sector cybersecurity

GET PAID!

Entry Level:

- » \$69,660 / year*

As You Gain Seniority:

- » \$124,910 / year*

Years 8+ Later in Your Career:

- » \$186,420 / year*

*Source: BLS OEWS (2024). These figures use the 10th, 50th, and 90th percentiles of all workers in the role as a proxy for seniority progression and for consistency with the United States Energy & Employment Report. Compensation figures should be used as a guide; actual compensation may vary depending on education, geography, experience, and many other factors.



ENERGY INDUSTRY CAREERS OFFER:

- » Excellent salaries
- » Opportunities for advancement
- » Job growth & stability
- » Professional development and training
- » Great benefits

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