

Power Generation Roundtable IT's Role in Improving Reliability and Profitability



Moderator

Michael Montagliano,
Chief of Innovation

MEET OUR PRESENTERS



Mikes Spoont

Power Team Lead and President



Ben Wilcox

Chief Technology Officer of
Security and Cloud



Luke Bixby

Senior Technology Consultant

Question #1





What are the steps toward aligning
IT and OT?



Mikes Spoont

Power Team Lead and President

IT is critical to running a business, OT is critical in running production. Today, they are two sides of the same coin because of the critical nature of aggregating data from generation/production and analyzing and securing data to optimize running the business and getting the best financial ROI as possible.

Working with a company that has experience across both sides of the company, OT and IT, can then bring significant rewards.



Luke Bixby

Senior Technology Consultant

Maintain a point of view that there are no access points to control systems and networks, and that your control systems are completely isolated.

Make sure you're working with vendors who make security a priority.

Implement technology, like multi-factor authentication, that enables secure access of data (Historical data, Emissions monitoring, Combustion Dynamics)



Ben Wilcox

Chief Technology Officer of Security and Cloud

Bring IT, OT, and IoT data sources together.

Expanding the data from equipment into departments will allow for better decision marketing.

Understand how you can use data to make better decisions.

- Maintenance Planning
- Asset Performance Management and Asset Investment planning
- Digital Twins
- Enterprise Asset Management
- Augmented VR to support maintenance

Question #2





What strategies and technology can be utilized to improve resiliency?



Ben Wilcox

Chief Technology Officer of
Security and Cloud

Act now. Plan for the physical and the digital aspects equally.

Team up and collaborate across the organization to understand where your risks and gaps are.

Make sure to regularly perform:

- system acceptance testing
- failover testing
- annual testing of BC/DR processes associated with IT/OT
- penetration testing and breach attack simulation



Luke Bixby

Senior Technology Consultant

Protect your backups by sandboxing them away from your production networks and providing security which is separate from other production systems.

Test backups monthly and maintain industry best practices by encrypting and storing multiple copies including one off-site (typically cloud based storage)



Mikes Spoont

Power Team Lead and President

Cyberattacks can have a significant impact, not just on the affected businesses, but on consumers as well.

The negative consequences of the outage, including the unwanted publicity, strongly encourages companies to plan for the worst and invest for the best.

Power generation companies need to move from just meeting NERC requirements to full-scale resilience.

Question #3





How can a plant utilize the cloud and IT standardization to ensure streamlined IT transitions in the future?



Mikes Spoont

Power Team Lead and President

The owners of generating assets main objective is often to have maximum flexibility in the evolution of a plant's financials.

The cloud offers significant flexibility due to the nature of leveraging cloud services.

Fewer on prem investments translates into easier mobility of asset ownership.



Luke Bixby

Senior Technology Consultant

The cloud can be a benefit especially to a greenfield site or acquisitions.

IT providers can build out cloud resources just as you build out a physical environment in a datacenter.

These resources can be utilized in temporary trailers or remote locations as plant systems are brought online or transferred between owners. Then once the physical datacenter is ready the migration and end user impact are greatly reduced or even unknown to the end user.



Ben Wilcox

Chief Technology Officer of Security and Cloud

Divesture is infinitely easier to perform in the cloud as physical network separation and reconfiguration can often times be avoided.

Cloud services can also be templated so that repeated configuration can be automated to reduce time to implementation.

Question #4

What ways can power generators
address the challenges of maintaining
NERC compliance?



Ben Wilcox

Chief Technology Officer of
Security and Cloud

A good partner can help align you faster to outcomes.

They have go-to solutions that can help you achieve compliance more quickly than doing it yourself.

Plan now for new legislation.

Align your cybersecurity program to NERC requirements.



Luke Bixby

Senior Technology Consultant

Organizations need to keep up with constantly evolving compliance regulations so they're not always a disruption

Consider utilizing compliance managed services and/or a vCISO.

Have personnel who can Interpret Industry Security Bulletins and understand what IP assets the business and controls environment contain.

Create partnerships with an experienced organization that can help you satisfy NERC requirements.

Question #5

What are the elements of a security program that are most essential for minimizing outages related to a cyberattack?



Ben Wilcox

Chief Technology Officer of
Security and Cloud

People, process, technology

Invest in a cyber-first infrastructure

Monthly vulnerability scanning- logging
& a plan to remediate

Deploying Managed Detection and
Response (MDR)

- Disaster Recovery
 - DR plans that encompass edge controls systems such as emissions monitoring, tuning and historical data.
 - Routine testing of your backups
 - Treating Cloud as a "secondary site" as Energy Organizations are geographically located in one location.



Luke Bixby

Senior Technology Consultant

Gain visibility into the unique communication protocols within your control networks.

Have a process to analyze traffic and flag and follow up on anomalies. Anomalies could include something as simple as a vendor accessing systems in non-approved methods. Having insight into this type of information is critical to a security program.

Question #6

How can IT efficiently operate and secure a remote site?



Ben Wilcox

Chief Technology Officer of
Security and Cloud

Centralization, building resiliency across
the IT Stack (hardware, networking,
circuits)

Have the ability to collect and analyze
Endpoint security, telemetry 24/7



Luke Bixby

Senior Technology Consultant

IT becomes the critical point of control
for power generation

- Diversity within circuits,
paths/networks
- Remote Access, segmentation of role-
based access and providing high
levels of security like MFA
- Automated reports/alerts

Question #7

What's one piece of advice you have for power plants to utilize IT to improve reliability and profitability?



Ben Wilcox

Chief Technology Officer of
Security and Cloud

Look at cloud and how it can help satisfy your day-to-day IT needs, while keep OT operations either in the cloud (if possible due to NERC) or remaining on premises.



Luke Bixby

Senior Technology Consultant

Identify opportunities to utilize automation especially for repetitive tasks, this will free up resources to focus on what's important to the organization.



Mikes Spoont

Power Team Lead and President

Data, flexibility, and automation are the key elements of a sound IT strategy that will provide the best opportunity to “generate” profits. Overlay all of that with tight, yet flexible, security, and you have the recipe for smooth operations and desirable resilience.



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