

Overview

Modernize Utility Operations with Private Cloud

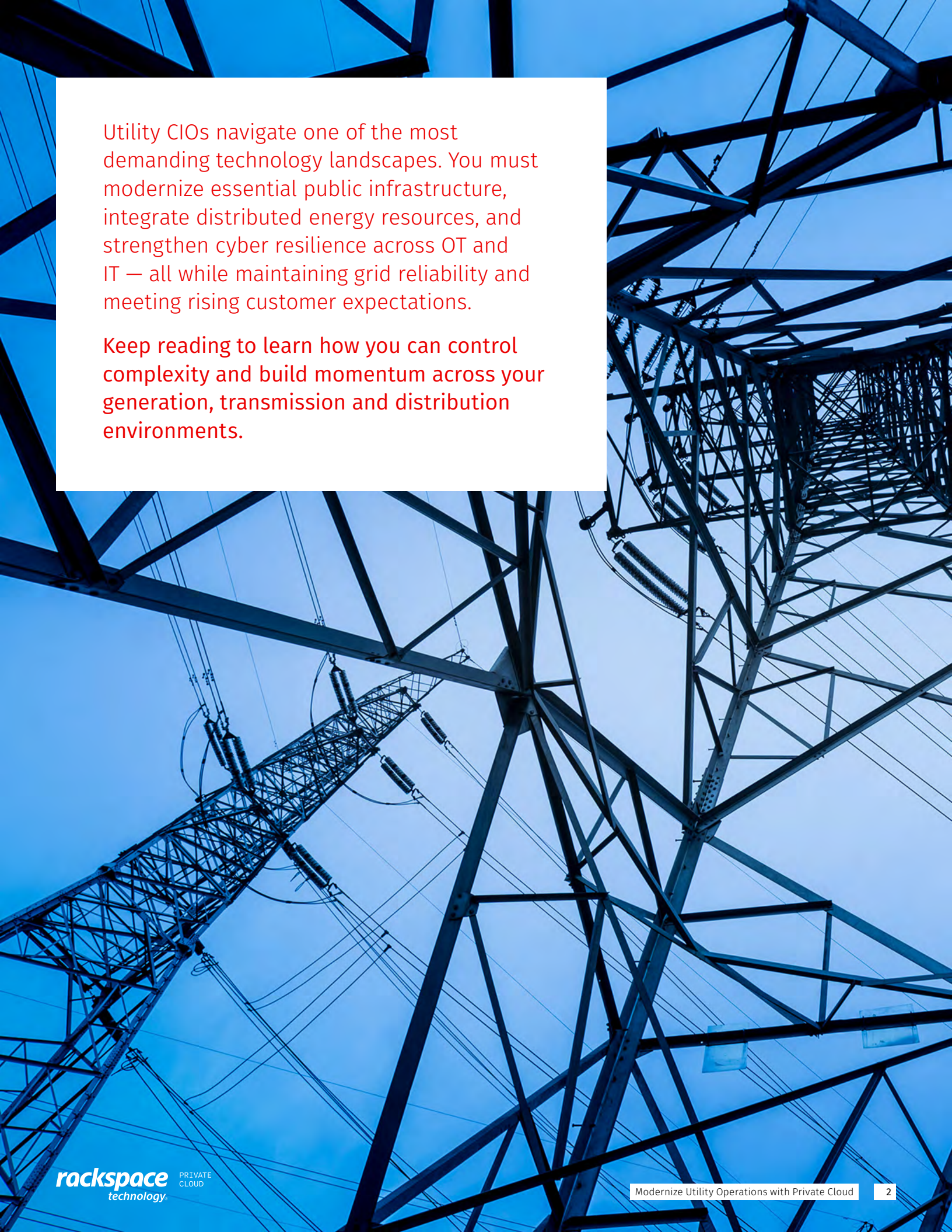
Complexity managed... Momentum
accelerated.



Contents

- The challenge** 3
 - OT/IT integration complexity 3
 - Renewable energy and DER integration 3
 - Customer experience pressures 3
 - Regulatory and compliance burden 3
- Why Private Cloud for utilities** 4
 - Proven outcomes by function 4
 - Generation 4
 - Transmission 4
 - Distribution and customer operations 4
- Key Rackspace Private Cloud capabilities for utilities** 5
 - Compliance and security built in 5
 - NERC-CIP alignment 5
 - Data sovereignty 5
 - Zero trust security 5
 - 24x7x365 threat detection and response 5
- Next steps** 6
 - Schedule a grid modernization assessment 6
 - Request a cyber resilience audit 6
 - Explore managed private cloud solutions from Rackspace Technology 6





Utility CIOs navigate one of the most demanding technology landscapes. You must modernize essential public infrastructure, integrate distributed energy resources, and strengthen cyber resilience across OT and IT — all while maintaining grid reliability and meeting rising customer expectations.

Keep reading to learn how you can control complexity and build momentum across your generation, transmission and distribution environments.

The challenge

OT/IT integration complexity

ICS, SCADA, AMI and substation automation systems were engineered for stability and predictable control rather than cloud-native connectivity. Extending these platforms into modern analytics, automation and customer systems introduces challenges in security, reliability and regulatory compliance. Without precise architectural control, you face increased risk of operational disruption and reduced reliability.

Renewable energy and DER integration

Solar, wind and distributed power sources increase system variability and operational complexity. Real-time load analysis, voltage monitoring and DER coordination require fast access to reliable data while maintaining NERC-CIP compliance and visibility across wide geographies.

Customer experience pressures

Smart meters, EV charging networks and battery storage create high-velocity data streams. Many legacy CRM and billing platforms weren't built to provide the real-time visibility needed for proactive communications, digital self-service and timely outage updates.

Regulatory and compliance burden

NERC-CIP, emissions reporting mandates and ESG frameworks demand centralized data platforms, hardened network segmentation and repeatable audit evidence. Manual processes add risk and cost when requirements intensify.

Why Private Cloud for utilities

Rackspace Private Cloud provides a secure, compliant and high-performance foundation that supports grid modernization, DER integration and customer experience transformation without the latency, data sovereignty or cost-volatility constraints of public cloud.

- ✓ Real-time grid analytics for voltage stability and load forecasting
- ✓ Secure OT/IT segmentation aligned to NERC-CIP
- ✓ Automated compliance workflows for consistent audit readiness
- ✓ Modernized customer billing and digital engagement platforms
- ✓ 24x7x365 managed operations backed by utility-focused expertise

Proven outcomes by function

Modernization delivers its strongest impact when viewed through the lens of each operational domain. Across generation, transmission and distribution, utilities see consistent gains in reliability, visibility and operational efficiency.

Generation

Modernization begins at the generation layer, where better data flow and improved system visibility strengthen performance, forecasting and regulatory alignment.

- ✓ Real-time monitoring and performance optimization across renewable and traditional assets
- ✓ Centralized emissions reporting and regulatory controls
- ✓ Automated demand forecasting and dispatch optimization

Transmission

Modernization at the transmission layer strengthens grid stability by unifying system intelligence, improving situational awareness and enabling faster, more accurate operational decisions.

- ✓ Secure OT/IT data integration for stability analytics
- ✓ Hardened operational segmentation aligned to NERC-CIP
- ✓ Predictive contingency analysis and fault detection

Distribution and customer operations

Modernizing distribution and customer operations enables real-time grid responsiveness, improves customer engagement and strengthens the reliability of every service interaction.

- ✓ Scalable platforms supporting AMI, EV infrastructure and DER aggregation
- ✓ Modernized billing and engagement platforms for digital self-service
- ✓ Automated outage management and restoration prioritization



Key Rackspace Private Cloud capabilities for utilities

A modern private cloud foundation gives utilities the performance, control and resilience needed to support mission-critical grid operations from generation to customer engagement.

- ✓ Load forecasting and demand planning with GPU-enabled HPC clusters
- ✓ Transmission-grade SCADA support on private edge cloud with ultra-low latency
- ✓ Advanced metering infrastructure on private IoT platforms with streaming ingestion
- ✓ Outage management systems with cloud-native backends and workforce integration
- ✓ DMS/ADMS hosting on high-availability private cloud
- ✓ Customer information and billing on secure, managed private SaaS-style platforms

Compliance and security built in

Modernizing utility infrastructure requires a security posture that keeps pace with operational demands, regulatory frameworks and the evolving threat landscape. We build compliance and protection into the architecture itself, so your teams can operate with confidence across every part of the grid.

NERC-CIP alignment

Architectures designed to meet Critical Infrastructure Protection standards with documented controls and audit trails.

Data sovereignty

Keep regulated data on-premises or in dedicated private environments with full operational visibility.

Zero trust security

Continuous verification, micro-segmentation, and least-privilege access across OT and IT networks.

24x7x365 threat detection and response

Round-the-clock SOC operations deliver continuous monitoring, utility-specific threat intelligence and coordinated incident response protocols that help protect critical infrastructure from evolving cyber risks.



Next steps

Schedule a grid modernization assessment

A [Grid Modernization Assessment](#) gives you a clear view of how well your current OT and IT environments support your long-term operational strategy. We work with your teams to map system interdependencies, evaluate NERC-CIP alignment and analyze the readiness of your network and data flows for DER expansion. The outcome is a practical set of recommendations that help you move from incremental updates to coordinated, grid-wide modernization.

Request a cyber resilience audit

Cyber resilience is now a core operational requirement for utilities. Our [cyber resilience audit for utilities](#) examines the safeguards across your OT and IT environments, from network segmentation and access pathways to monitoring coverage and response processes. You receive a detailed report highlighting vulnerabilities, improvement opportunities and prioritized actions that strengthen your ability to withstand and recover from threats without compromising grid reliability.

Explore managed private cloud solutions from Rackspace Technology

[Rackspace Managed Private Cloud](#) provides a tailored operational platform for AMI, SCADA and customer-facing systems that need predictable performance, regulatory control and consistent uptime. We show you what modernization looks like in practice: how data sovereignty is preserved, how latency-sensitive workloads run with stability and how operational complexity decreases when experts manage the day-to-day infrastructure. You see how similar utilities have modernized without introducing public cloud risk or cost volatility.

Reach out to Rackspace Technology see how modernization strengthens grid reliability from generation to the customer meter.

 [Learn more](#)

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