

Increasing Future Readiness: Energy and Utilities Leaders Prioritising Technology Modernisation

By Tyler Chase

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Successful companies view even challenging times as catalysts for innovation and growth, actively seeking opportunities where others see obstacles.

Over the last 13 years, we have issued annual research reports on the top risks faced by leaders all over the world. This year, we have added an emphasis on opportunities to set the tone for identifying and responding proactively to emerging trends, market shifts and evolving customer expectations. Organisations balancing risk management with a strong focus on seeking growth are better equipped to innovate products and services, enhance their resilience, adapt to change, and achieve top-line growth and strategic differentiation. It is all about unlocking opportunity.

Our 14th annual **Executive Perspectives on Top Risks and Opportunities Survey** contains insights from 1,540 board members and C-suite executives around the world regarding their views on:

- Three specific areas for growth considering the current environment;
- Opportunities and challenges associated with the transformative impact of artificial intelligence (AI) on their organisations;
- The top risks on the horizon for the near term (two to three years ahead) related to 28 specific risks across three dimensions (macroeconomic, strategic and operational) and for the long term (a decade from now) related to 12 strategic and operational risk themes; and
- A discussion of their organisations' near-term strategic investment priorities, given the opportunities and the risks they face.

Our survey participants shared their views through an online survey conducted from early September through mid-October 2025. This paper offers specific insights into these issues from the perspective of the energy and utilities (E&U) industry.

Where do E&U leaders see the greatest opportunities for their organisation over the next two to three years?

As technology modernisation needs and operational pressures grow, E&U leaders are reassessing where the most meaningful opportunities lie for their businesses over the next few years. The picture that emerges is less about expanding into new markets and more about strengthening and extracting greater value from the systems, assets and customer relationships they already manage.

While 61% of executives expect solid revenue performance, their optimism is more measured compared with leaders in other industries included in our survey. With demand for services steady and revenue models shaped by regulation, growth for E&U firms tends to follow a predictable, steady path — so leaders are focusing less on rapid revenue expansion and more on productivity, efficiency and resilience. And, after being relatively insulated through a softer economic period, many E&U companies are increasingly zeroing in on cost discipline, operational excellence and long-term resilience.

There is optimism for potential growth opportunities



*Based on a five-point scale assessing agreement/disagreement.
Percentages reflect sum of "Agree completely" and "Agree somewhat" responses.*

A significant opportunity lies in modernising core infrastructure and operations. Many E&U companies are investing in updated enterprise resource planning (ERP) platforms, grid technologies and field systems that can support better planning, asset management and outage response. These investments are intended to enhance reliability, reduce operating costs and create the data backbone needed to support advanced analytics and AI. As firms move away from fragmented, legacy environments, leaders see the potential to streamline processes, automate routine activities and redeploy scarce talent to higher-value work.

Customer and market strategies are also an important growth lever for the E&U industry. Opportunities to deepen customer relationships and expand market share include offering bundled services, collaborating with technology and cloud providers to introduce new offerings, and supporting emerging demand such as electric vehicle (EV) adoption.

Building stronger ecosystems — with technology partners, suppliers and, in some cases, distributed energy providers — is another significant opportunity, as E&U firms look to share data and collaborate more closely across the value chain. Many leaders also see selective opportunities tied to energy transition, particularly in projects that align reliability, affordability and sustainability.

What will be the organisation’s most significant challenges regarding the impact of AI over the next two to three years?

The most significant AI challenges for E&U companies over the next few years stem less from ambition and more from the realities of legacy infrastructure, data and skills.¹ The top concern is integrating AI with existing technologies and business processes. Many fundamental operational systems and back-office platforms were not designed with modern data architectures in mind, making it difficult to connect datasets, scale pilots or embed AI into day-to-day workflows.

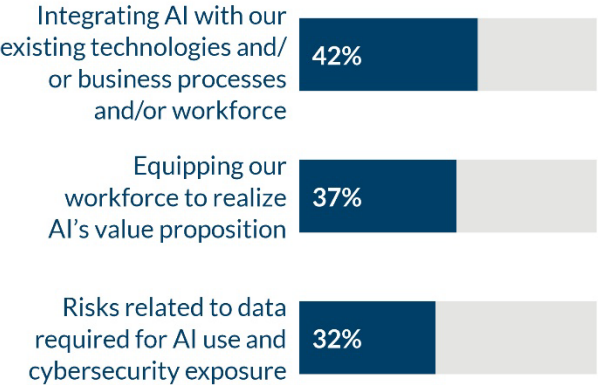
The second challenge is equipping the workforce to realise AI’s value. As E&U firms modernise systems and introduce AI-enabled tools, employees will need support adapting to new decision processes, data flows and operating models. Given the industry’s reliance on long-tenured teams with deep institutional expertise, change management and enablement must go beyond technical training to build trust in how AI complements their judgement rather than replaces it.

Data and cybersecurity exposure round out the top three AI-related challenges. E&U businesses manage sensitive operational data, customer information and critical infrastructure systems, raising the stakes around data quality, access controls and protection from cyber threats. Leaders are attentive to the risk that poorly governed AI models or insufficient safeguards could introduce new vulnerabilities.

Other concerns include the ability to deploy AI at a competitive pace (29%) and the need for clear governance and accountability for AI-driven decisions (28%). Some executives also worry about AI’s potential to disrupt existing business models (22%) or the implications of emerging regulations (20%).

Taken together, these findings highlight that realising AI’s value across the E&U sector will depend on organisations’ ability to modernise core systems, strengthen their data foundations, implement disciplined governance and prepare their workforce to operate effectively alongside increasingly intelligent tools.

Top 3 priorities – impact of AI



¹ Percentages in the top three priorities — impact of AI chart and commentary reflect frequency with which each area was selected among the top three.

What are the most significant short-term (two to three years) concerns and risks on the minds of E&U executives?

Over the next two to three years, E&U leaders face a near-term risk landscape shaped by climate pressures, supply chain instability and the increasing complexity of modernised systems.

Topping the list is the impact of climate change and environmental and sustainability requirements, which again ranks as the number one concern for this industry — the only group in our survey where this is true. More severe storms, heat events and wildfires are stressing aging infrastructure and elevating expectations for resiliency and reporting. The rising threat of catastrophic natural disasters remains close behind, underscoring how closely climate risk and operational continuity are linked.

Third-party risks continue to climb, reflecting how dependent E&U companies are on extensive vendor networks for equipment, materials and field services. Ongoing mergers and acquisitions (M&A) activity within the industry is adding to this uncertainty by reducing the number of available suppliers, concentrating risk across fewer players and complicating long-term procurement planning. These pressures are magnified by ongoing supply chain fragility and geopolitical shifts that can disrupt access to critical components.

Another notable movement in this year’s rankings is the rise of cyber threats, which have increased in priority as E&U firms advance modernisation initiatives. As ERP upgrades, grid automation and data integration efforts accelerate, the attack surface expands across both IT and operational technology (OT) environments. Executives are also expressing concern about new exposures introduced through AI pilots, cloud adoption and deeper integration with third-party systems.

Regulatory uncertainty, economic pressures, and persistent challenges with labour availability and rising labour costs round out the top 10 list of near-term concerns. For E&U leaders, the overarching challenge is maintaining reliable, affordable service while advancing modernisation and transition strategies in an environment where climate, cyber and supply chain risks are all intensifying.

Top global near-term risks

2026 rank	Risk issue	Average*	2025 rank
1	Impact of climate change and environmental and sustainability requirements and/or expectations	3.23	1
2	Third-party risks	3.19	10
3	Rising threat of catastrophic natural disasters and weather phenomena	3.15	3
4	Heightened regulatory change, uncertainty and fragmentation	3.12	2
5	Cyber threats	3.11	12

* Average based on a five-point scale where 1 reflects “No impact at all” and 5 reflects “Extensive impact.”

Based on these near-term risk issues, in what areas is the organisation likely to invest the most over the next two to three years, and why?

Given the array of complex risks they are managing, many E&U companies are channeling their near-term investments into the areas that most directly support reliability, resilience and long-term modernisation.²

Infrastructure modernisation stands out as the defining priority, with 63% of respondents selecting it as a top investment area. That is the highest percentage recorded for any priority in any industry group. Leaders are moving quickly to upgrade aging ERP platforms, modernise grid and field systems, and replace operational technologies that no longer meet today’s performance, reliability or security needs. These improvements are seen as essential to managing climate-related disruptions, increasing flexibility in grid operations and creating the foundation to support digital and AI capabilities.

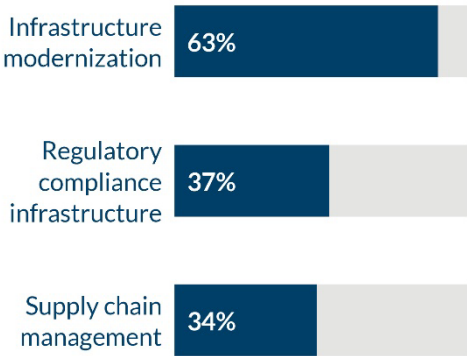
Alongside these efforts, many companies plan to strengthen regulatory compliance infrastructure. Shifting emissions rules, evolving reporting requirements and increased scrutiny of resilience planning — especially in the U.S. — are pushing organisations to bolster the systems, controls and data needed to respond more effectively to regulatory expectations.

Supply chain management is another critical focus area for E&U executives. Recent instability, combined with consolidation within parts of the industry, and growing dependence on key suppliers, has underscored the need for better visibility into vendor performance, material availability and third-party risk. Leaders expect to invest in tools and data platforms that help anticipate disruptions and support more confident long-term planning.

Nearly a third (30%) of executives also expect increased spending in the near term on business process improvements to streamline workflows, automate routine activities and improve productivity across finance, operations and customer-facing teams. Sustainability initiatives rank sixth among top investments and, for many firms, are likely to include efforts that strengthen resilience while advancing environmental goals cost-effectively.

Across all these top investment areas, the emphasis is on building a stronger, more adaptable foundation — one that helps E&U companies navigate near-term pressures while preparing for a more digital, data-driven and AI-powered future.

Top 3 investment areas



² Percentages in the top investment areas chart and commentary reflect frequency with which each area was selected among the top three.

How do E&U leaders view the 10-year risk outlook for their organisation?

Looking out over the next decade, E&U leaders see a risk environment defined less by isolated disruptions and more by long-running structural forces that will influence their planning, capital investments and workforce strategies for years to come.³

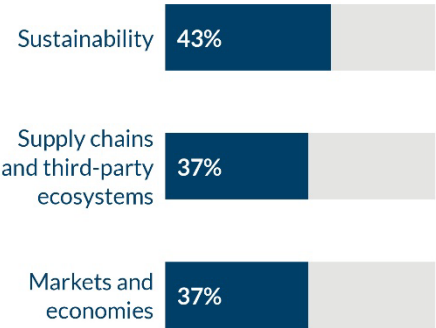
As in last year’s analysis of top risks for this industry, sustainability remains the defining long-term theme — rising to 43%, the highest among all risk categories. Executives anticipate continued pressure around climate impacts, transition pathways and stakeholder scrutiny, even as near-term policy trends — particularly in the U.S. — may shift with election cycles. The tension between reliability, affordability and decarbonisation is becoming more pronounced, with infrastructure decisions made today potentially carrying decades-long implications.

Supply chains and third-party ecosystems and markets and economies also feature prominently in the 10-year risk outlook for the E&U industry. Similar to last year, leaders expect ongoing volatility in global trade dynamics and access to critical components. But there is another concern: industry consolidation, which is reducing the number of available suppliers and increasing long-term dependency risk. As grids become more digital and interconnected, the strength and stability of technology partners, equipment suppliers and service firms will be inseparable from an energy or utility company’s own resilience.

Concerns related to security and privacy (35%), customers and competition (29%), and geopolitical challenges (28%) round out the core long-term risk set. These findings suggest leaders are increasingly focused on maintaining trust — not only by defending against cyber threats, but also by managing the complexities of IT-OT convergence, protecting shared data across broader ecosystems, and sustaining customer confidence amidst rapid digital change.

Finally, organisational resilience and culture and talent challenges (each 26%) remain central to the 10-year risk outlook. E&U leaders see the need to retain deep expertise while building the skills and company culture required to enable ongoing modernisation. And while AI deployments (20%) and other emerging technologies appear lower on the risk ranking, their long-term effect will hinge on careful deployment, strong data foundations and clear governance.

Top 3 long-term challenges



³ Percentages in the top three long-term challenges chart and commentary reflect frequency with which each area was selected among the top three.

Guidance/call to action for next two to three years

The challenge ahead for E&U companies is turning today's risk pressures into clear priorities — where to modernise, how to strengthen resilience and how to allocate limited resources. Drawing on our survey findings and client experience, we offer the following actions for consideration:

- **Treat infrastructure modernisation as a risk mandate, not just a technology upgrade.**
Prioritise programmes that replace legacy ERP, IT and OT systems, harden the grid, and improve outage response. Focus on platforms that improve visibility, automate routine work and create the data backbone for future AI use.
- **Tighten third-party and supply chain oversight with better data.**
Map critical vendors, materials and services more rigorously. Use analytics to monitor exposure to delays, quality issues and consolidation, and build contingency plans for high-dependency relationships.
- **Build AI readiness on a strong foundation.**
Start with integration, data quality and governance. Identify a few high-impact back-office and planning use cases, equip teams to use new tools effectively, and establish accountability for AI-enabled decision-making.
- **Link climate and catastrophe risk directly to capital planning.**
Use climate and natural disaster scenarios to help determine where to modernise first, which assets to fortify and how to prioritise resilience investments that support the sector's long-term reliability, sustainability and modernisation goals.
- **Invest in workforce adaptability, not just new roles.**
Support experienced teams with training, knowledge transfer and clear communication about how modernisation and AI impacts work — without assuming the need for large-scale displacement.
- **Use M&A and restructuring to simplify, not multiply, complexity.**
When integrating acquired assets, streamline systems and vendors to avoid compounding supply chain dependencies, operational complexity and cyber-risk exposure.

About the author



Tyler Chase is the global leader of Protiviti's Energy and Utilities (E&U) industry practice, which covers all segments of the Oil and Gas value chain, Power and Utilities, Renewables, and Mining. In this role, Tyler ensures that Protiviti has robust offerings in Internal Audit and Consulting services for our E&U clients in the global market they operate. This is accomplished through consistent client service; investments in methodology and tool development; proactive thought leadership, leveraging our collective expertise, global collaboration and teaming; and industry conferences and training. Tyler also works with many clients across the broad spectrum of E&U with Internal Audit outsourcing or co-sourcing, Enterprise Risk Management, Business Performance Improvement, and IT Consulting engagements.

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