

EXECUTIVE PERSPECTIVES ON TOP RISKS

for the Near- and Long-Term

Climate-related trends and policy shifts creating risks and opportunities for the energy and utilities industry

by Tyler Chase, Managing Director, Global Leader, Energy and Utilities Industry Practice

Boards of directors and senior executive teams face a complex web of uncertainties. These may generate opportunities for strategic advantage or risks leading to unexpected disruption and performance shortfalls. An ability to anticipate risks that may be on the horizon before they become imminent can help leaders navigate unfolding developments — particularly those that are uncontrollable — that may impact their organization's value and growth objectives.

Our 13th annual **Executive Perspectives on Top Risks Survey** contains insights from 1,215 board members and C-suite executives around the world regarding their views on the top risks they see on the near- and long-term horizons. Specifically, our global respondent group provided their perspectives about the potential impact over the near term (two to three years ahead) and long term (over the next decade) of 32 risk issues across these three dimensions:

- **Macroeconomic risks** likely to affect their organization's growth opportunities
- **Strategic risks** the organization faces that may affect the validity of its strategy for pursuing growth opportunities
- **Operational risks** that might affect key operations of the organization in executing its strategy

Commentary — Energy and Utilities industry group

The global energy and utilities (E&U) industry is undergoing a significant period of change due to regulatory shifts, sustainability imperatives, operational pressures and rapid technological advancements. In many ways, E&U companies are being asked to reinvent themselves — balancing innovation with resilience, decarbonization with affordability and technology adoption with security — while they navigate climate-related challenges, including those driven by policy.

Governments worldwide have been tightening environmental regulations, setting ambitious carbon reduction targets and pushing utilities to accelerate the transition to renewable energy. In the U.S., the

Inflation Reduction Act (IRA) has helped to propel renewable energy development, including historic levels of investment in solar, wind, battery storage and grid modernization. However, the future of many of these projects is now uncertain with a new U.S. administration focused on prioritizing reducing industry regulations, including climate rules, and freezing clean energy funding.

Operationally, energy companies find they must balance the need to upgrade aging infrastructure with the pressure to keep costs in check, especially as inflation and geopolitical instability drive up material and fuel prices. Utilities in the U.S. are under mounting pressure to strengthen grid resilience in the face of climate-driven extreme weather events, from hurricanes and heatwaves to wildfires and winter storms.

Meanwhile, technology is reshaping nearly every aspect of the E&U industry. Utilities are embracing automation, AI and Internet of Things (IoT)-enabled devices to improve everything from operational efficiency to customer service. Oil and gas firms are also leaning into digital transformation and using advanced analytics, remote monitoring and predictive maintenance to enhance safety, optimize production and reduce emissions.

However, as these firms broaden their embrace of emerging tech, their attack surface for cyber threats expands. Even so, after jumping to the top risk last year, cyber threats are not the top risk concern for E&U industry executives for the near term, according to our latest Executive Perspectives on Top Risks Survey. It's the impact of climate change.

Analysis of the top near-term risks for E&U

E&U industry group stands apart in its priority ranking of climate change risk

Across the many industries represented in our survey, only the E&U industry group identified the impact of climate change and other environmental and sustainability requirements and expectations as their top risk concern for the next two to three years. This was also the only group to classify it as a “significant impact” risk for the near term. Notably, this risk did not rank among the overall top 10 risks among all respondents in our global survey.

The heightened focus on climate change within the E&U sector is hardly surprising, though, given the industry's front-line role in global sustainability efforts. Despite shifting political landscapes in the U.S. and other regions, climate action remains a strategic imperative for many E&U businesses as they pursue net-zero targets and navigate increasingly complex and shifting regulatory environments.

Utilities continue to invest heavily in renewable and sustainable energy sources, including solar, wind and nuclear power. And the oil and gas sector has accelerated investments in renewable natural gas, carbon capture technologies and biofuels. However, as noted earlier, potential policy rollbacks — such as changes to the IRA in the U.S. and proposed easing of environmental reporting requirements in Europe — could slow progress on projects and introduce uncertainty for long-term sustainability investments.

Regardless of any shifts in policies related to climate change, energy infrastructure remains vulnerable to weather-related disruption, whether from wildfires, hurricanes, heatwaves or polar vortexes. And it's clear

from our latest Top Risks survey that E&U executives are keenly focused on the potential risk to their operations. The rising threat of catastrophic natural disasters and weather phenomena ranks third among the near-term top risks for this industry group, the same position it held in our previous year's survey.

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The evolving regulatory landscape for E&U creates both opportunity and uncertainty

Regulatory uncertainty remains a top near-term strategic risk for E&U companies. It ranks second, unchanged from last year's survey. Energy has always been a highly regulated industry, but evolving policies are creating volatility for E&U businesses trying to manage complex compliance requirements, set operational strategies and make sound investment decisions.

The political environment in the U.S. presents a dichotomy. The current administration's pro-oil-and-gas stance — marked by deregulation, expanded offshore drilling rights and tax incentives — could spur growth in fossil fuel projects. At the same time, utilities may face uncertainty for long-term sustainability planning amid rollbacks in emissions standards and clean energy mandates. Committing to large-scale renewable energy projects with confidence may prove challenging for E&U companies in this environment.

Worries about rising labor costs and workforce challenges

E&U executives rank rising labor costs as the fourth most significant near-term risk for their businesses. This risk did not appear in the top five for this industry group in our 2024 survey. Its presence on this year's list is likely due to two key factors:

- **Intense competition for skilled talent, especially in areas like renewable energy and emerging technology:** The E&U industry is racing against time to replace an aging workforce. While younger generations of workers are showing more interest in E&U careers, particularly for sustainability-related roles, wage inflation and competitive hiring pressures are driving up labor expenses.
- **The trend toward offshoring:** Some large energy companies have reduced their domestic workforce, opting to offshore engineering and back-office functions. This trend in the industry suggests a strategic shift in workforce management, with a focus on cost control.

E&U executives anticipating supply chain disruptions and material shortages

Supply chain uncertainty rounds out the top five near-term risks for the E&U sector. The industry is heavily dependent on a global network of suppliers for construction materials, maintenance equipment and technology.

More and higher tariffs, geopolitical instability and logistics bottlenecks are all exacerbating supply chain constraints for E&U firms. The solar and wind energy sectors are particularly at risk of rising costs due to

import restrictions on crucial components, including solar panels and turbine materials. These disruptions can threaten project timelines and increase capital expenditures, putting even more pressure on utilities striving to transition to cleaner energy sources.

Risk category	Top 10 near-term risk issues	Score
S	1. Impact of climate change and other environmental and sustainability requirements	3.28
S	2. Heightened regulatory change, uncertainty and scrutiny	3.26
O	3. Rising threat of catastrophic natural disasters and weather phenomena	3.14
M	4. Increases in labor costs	3.12
O	5. Uncertainty surrounding core supply chain ecosystem	3.09
M	6. Geopolitical shifts, regional conflicts and instability in government regimes	3.09
M	7. Economic conditions, including inflationary pressures	3.06
M	8. Talent and labor availability	3.04
M	9. Changes in global markets and trade policies	2.99
O	10. Third-party risks	2.98

Each risk was rated in terms of its relative impact using a five-point Likert scale, where a score of 1 reflects “No Impact at All” and a score of 5 reflects “Extensive Impact” to their organization over the near term (next two to three years).

An overview of the top long-term risks for the E&U industry

Looking ahead to 2035, cyber threats reemerges as one of the most pressing operational risks for the E&U industry — as it does for all industry groups included in our global Top Risks survey. For the E&U industry group, this risk is tied for the top spot with supply chain vulnerabilities and natural disaster concerns.

As energy networks become more digitalized and interconnected, the need for E&U firms to increase investment in robust cyber defenses, threat intelligence capabilities and cybersecurity compliance frameworks will only become more vital to increasing their overall resilience against cyberattacks.

E&U companies operate critical infrastructure and thus are prime targets for cyberattacks from nation-state actors and cybercriminals seeking to disrupt energy production and transmission. While cyber threats fell to 12th among the near-term risks for the E&U industry, its prominent ranking in the long-term risk outlook suggests that industry leaders recognize cyber threats will persist over the next decade and continue to increase in sophistication.

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As for the macroeconomic risks E&U executives see as most concerning for their firms over the long term, economic conditions, including inflationary pressures, are at the forefront. Interestingly, the executives surveyed ranked this risk seventh on the list of near-term concerns. Citing inflationary pressures as the number one risk for 2035 signals that most E&U leaders anticipate sustained cost increases across critical areas, including raw materials, transportation and labor.

Rising expenses will inevitably create financial strain on firms tasked with delivering large-scale, cost-intensive infrastructure projects. Higher inflation could lead to costly project delays and budget overruns for companies already operating on tight margins. Many E&U businesses will also face growing pressure to increase operational efficiencies and cost savings by negotiating with suppliers, optimizing processes and investing strategically in technology that enhances productivity.

Talent and labor availability ranks second among the long-term macroeconomic risks for the E&U industry. The evolving energy landscape is already driving fundamental changes in workforce requirements. As digitalization, smart grid technology and renewable energy solutions become more prevalent, the industry will require highly skilled workers proficient in emerging technologies, while maintaining a workforce that understands current plant and infrastructure systems. The challenge for E&U companies lies in bridging the skills gap, and recruiting and developing talent with expertise in AI, data analytics and advanced energy systems.

Regulatory uncertainty remains one of the most pressing strategic risks for energy companies for the long term. As governments around the world reassess (in some cases reiterate, and in others rethink and scale back) their climate commitments and energy policies, E&U businesses must prepare for shifting compliance requirements that may directly impact their operations, investment priorities and overall profitability — for better or worse.

To help mitigate regulatory risks over the next decade, E&U firms should prioritize proactive engagement with policymakers and regulatory bodies and invest in compliance frameworks that can help them adapt quickly to changing requirements with minimal disruption. Companies that align themselves with evolving regulatory expectations and demonstrate leadership in sustainable energy solutions will be well-positioned to navigate future uncertainty with confidence — and secure long-term market viability.

Respondents were asked to identify the top two risks in each category (macroeconomic, strategic, operational) separately. That is, respondents identified six risks (two in each category) as “top two” risks. For each category, the three risk issues (including ties) receiving the most responses by percentage are shown below.

Macroeconomic risk issues

Risk	Percentage
Economic conditions, including inflationary pressures	35%
Talent and labor availability	32%
Increases in labor costs	29%

Strategic risk issues

Risk	Percentage
Heightened regulatory change, uncertainty and scrutiny	46%
Impact of climate change and other environmental and sustainability requirements and expectations	36%
Limited opportunities for organic growth	25%

Operational risk issues

Risk	Percentage
Third-party risks	28%
Cyber threats	28%
Rising threat of catastrophic natural disasters and weather phenomena	28%
Uncertainty surrounding core supply chain ecosystem	25%
Ability to attract, develop and retain top talent, manage shifts in labor expectations, and address succession challenges	19%

About the Executive Perspectives on Top Risks Survey

We surveyed 1,215 board members and executives across a number of industries and from around the globe, asking them to assess the impact of 32 unique risks on their organization over the next two to three years and over the next decade, into 2035. Our survey was conducted online from mid-November 2024 through mid-December 2024. For the near-term outlook, each respondent was asked to rate 32 individual risks on a five-point Likert scale, where 1 reflects “No Impact at All” and 5 reflects “Extensive Impact.” For each of the 32 risks, we computed the average score reported by all respondents and rank-ordered the risks from highest to lowest impact.

We also asked executives to share their perspectives about long-term risks (over the next 10 years to 2035) by selecting the top two risks from each of the three dimensions (macroeconomic, strategic and operational). For each of the 32 risks, we calculated the percentage of respondents who included that risk as one of their two top risks for each dimension.

Read our *Executive Perspectives on Top Risks Survey* executive summary and full report at www.protiviti.com or <http://erm.ncsu.edu>.

Contact

Tyler Chase
Managing Director
Global Leader, Energy and Utilities Industry Practice
tyler.chase@protiviti.com

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