Shaping Europe's Energy Future: **Key Transition Priorities**

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* Certain questions allowed respondents to choose more than one answer. All responses were rounded to the nearest whole number. Responses will not always add up to an even 100%.

Overview

The path to a net-zero economy means a profound transformation of the energy sector, including how energy is generated, distributed, and consumed, which will take years to achieve. Yet, there is an urgency to make progress. Indeed, 71% of surveyed electrification purchase decision-makers in Europe cited the energy transition as a priority for their organization's near-term strategic goals.

Europe is seeing progress in several areas, including:

- Decarbonization: Reducing carbon emissions by moving away from burning fossil fuels, which is the primary driver of climate change.
- Renewable energy growth: Increasing renewable energy technologies, such as solar, wind, and geothermal, to replace fossil fuels.
- Energy efficiency: Improving the efficiency of energy use in various sectors, such as transportation, manufacturing, and buildings.
- Electrification: Shifting from fossil fuel-based energy sources to electricity, especially in areas like transportation and heating, where renewable energy can be used.
- Energy distribution: Developing advanced energy storage solutions and investing in grid modernization to integrate renewables and minimize supply interruptions.

The transition away from fossil fuels is a priority for European energy utilities and industries alike, but there is a reality gap – the need for more investment to meet clean energy goals, according to a new survey conducted by ABB's Distribution Solutions Division.

European electrification purchase decision-makers in France, Germany, Italy, Norway, and the U.K. were surveyed, and more than half (51%) recognize that their organizations lack the resources to meet their commitments in the energy transition.

While it's reassuring to see nearly three-quarters of respondents prioritizing this need, the survey also finds that we have a gap to close to meet the pledge made at the COP28 climate summit last year to triple renewable energy capacity by 2030 and double the average annual rate of energy efficiency every year until 2030. The survey confirms that utilities and industrial customers face common challenges in this transition. The challenges include controlling operational costs, managing infrastructure investments, addressing the need for a skilled workforce, and implementing new solutions such as energy storage.

As digital components and software solutions become increasingly essential to electrical equipment, survey respondents also noted the need to improve cybersecurity measures to reduce associated risks.

While facing the challenge of accelerating the energy transition, the European energy sector is preparing for a technology change in medium-voltage switchgear, a key component in electrical energy distribution. Due to new regulations, sulfur hexafluoride (SF6), a potent greenhouse gas commonly used as an insulator in switchgear, will be gradually eliminated. More than 80% of respondents confirmed that they would only switch to SF6-free switchgear because of the regulations.

The insights in this report are intended to help decision-makers navigate the future as they reassess strategies and operational spending related to the energy transition.

Survey details

Between Aug. 2 and Aug. 12, 2024, 850 switchgear and electrification purchase decision-makers were surveyed in the U.K., Norway, France, Italy, and Germany. Half of the respondents worked at energy utilities and the other half worked in industry.

The study was conducted on behalf of ABB Ltd. by Wakefield Research.

COUNTRIES REPRESENTED (SURVEY RESPONDENTS)

200	**France**
200	**Germany**
200	**Italy**
200	**U.K.**
50	**Norway**

Because of the technical nature of some of the survey topics, ABB has included a glossary of terms that will be commonly used throughout this report:

Energy Transition: The global energy sector's shift from fossil-based systems of energy production and consumption, including oil, natural gas, and coal, to one that produces very limited, if not zero, carbon emissions based on renewable energy sources like wind and solar.

Switchgear: A collection of circuit breakers, switches, and fuses used to distribute electrical energy. It isolates electrical equipment, preventing short circuits and overloads that could endanger workers and equipment. Switchgear is a vital part of electrical power systems and is used to de-energize equipment for maintenance and to clear faults. There are three different classes of switchgear systems: low-voltage for energy distribution within a small, defined area like a building (less than 1kV), medium-voltage for energy distribution from utilities across a city or a region (up to 50kV), and high-voltage for energy transmission over long-distances across countries (over 50kV). Switchgear enclosures are insulated with either air or gas to protect components from unintended arc faults.

Digitalized Switchgear: The integration of digital components, such as circuit breakers with embedded connectivity, integrated sensors, and digital relays that provide real-time data through a secure and fast communication interface. By leveraging multiple sensors, digitalized switchgear can continuously monitor its health, alert for necessary maintenance, and predict potential failures, preventing costly or unnecessary downtime. Utilities can gather data on the voltage and frequency changes in the network by collecting data from multiple nodes of the distribution grid, which will help control grid stability and reliability.

Top Themes Emerging in Europe

Energy is central to Europe’s transition toward climate neutrality by 2050, which aligns with the European Green Deal. Energy generation, distribution, and consumption are the biggest sources of greenhouse gas emissions in the EU (second-biggest contributor in the U.K.).

While organizations work to become more sustainable to meet the 2050 deadline, the energy transition is an immediate priority, something strategic to their business goals for the next one to two years.

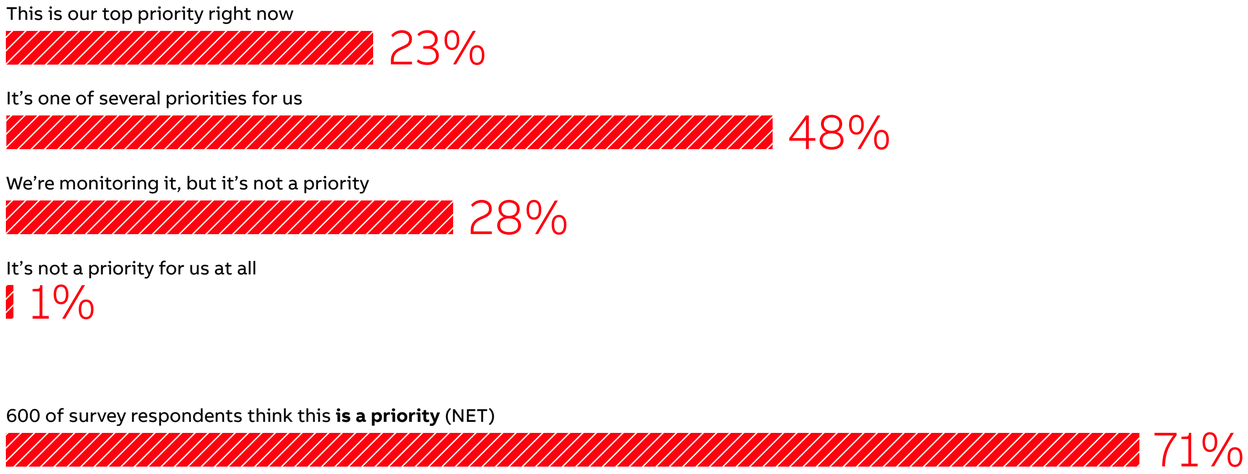
Survey results by country Page 24

Nearly a quarter of those surveyed (23%) said the energy transition was their organization's top priority, and almost half (48%) said it was one of several priorities. The 2022 energy crisis and Europe's heavy reliance on energy imports have brought the energy transition into sharper focus.

Both energy utilities and non-energy companies view creating a sustainable energy future as critical, with 7 out of 10 respondents in each group considering the energy transition a near-term priority. However, this priority varies by country. In Norway, where hydropower provides abundant clean energy and has enabled widespread electrification with low emissions, the energy transition is less urgent.

The transition also appears less urgent in Italy, where 6 out of 10 respondents said it was a priority. Italy has seen significant growth in renewable energy. In contrast, 8 out of 10 respondents in France said the energy transition is a priority. France has been an early leader in setting out an ambitious energy transition.

HOW IMPORTANT IS THE ENERGY TRANSITION TO YOUR ORGANIZATION'S STRATEGIC GOALS FOR THE NEXT 1-2 YEARS?



II

Companies are motivated to act by new or increasing regulations supporting the energy transition and the relentless drive to lower costs. Corporate leaders are also vital in shaping a cleaner and more sustainable energy future.

Survey results by country Page 24

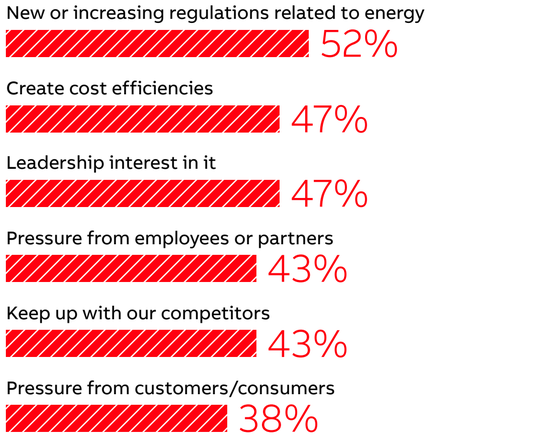
II

Regulations, cost efficiencies, and leadership interest are the top three factors driving business efforts in the energy transition. More than two-thirds of decision-makers (69%) are “at least somewhat” concerned that new or changing regulations could impact their organization’s energy transition plans.

Utilities and industrial customers face several challenges in this transition, including controlling operational costs, managing infrastructure investments, addressing the lack of a skilled workforce, and managing energy storage. As digital components and software solutions are integrated into electrical equipment, survey respondents also noted the need to improve cybersecurity measures to reduce associated risks. Nearly 80% express concerns that their organization’s cybersecurity measures are inadequate to meet evolving threats.

WHAT IS DRIVING YOUR EFFORTS IN THE ENERGY TRANSITION?

RESPONDENTS COULD CHOOSE MORE THAN ONE ANSWER



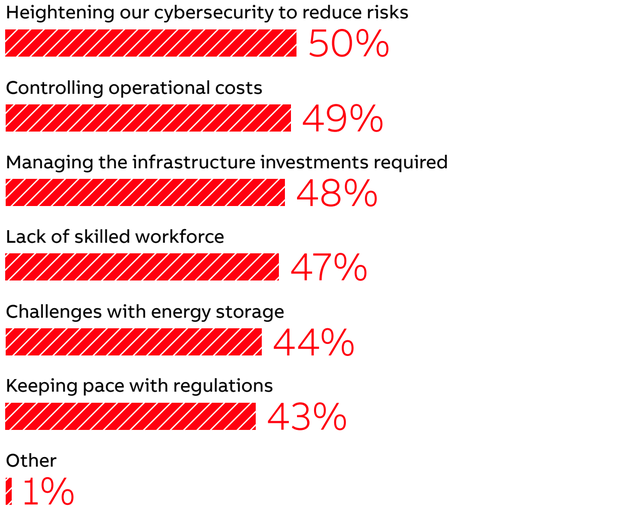
611 of survey respondents cited either **pressure from employees/partners or leadership interest** (NET)

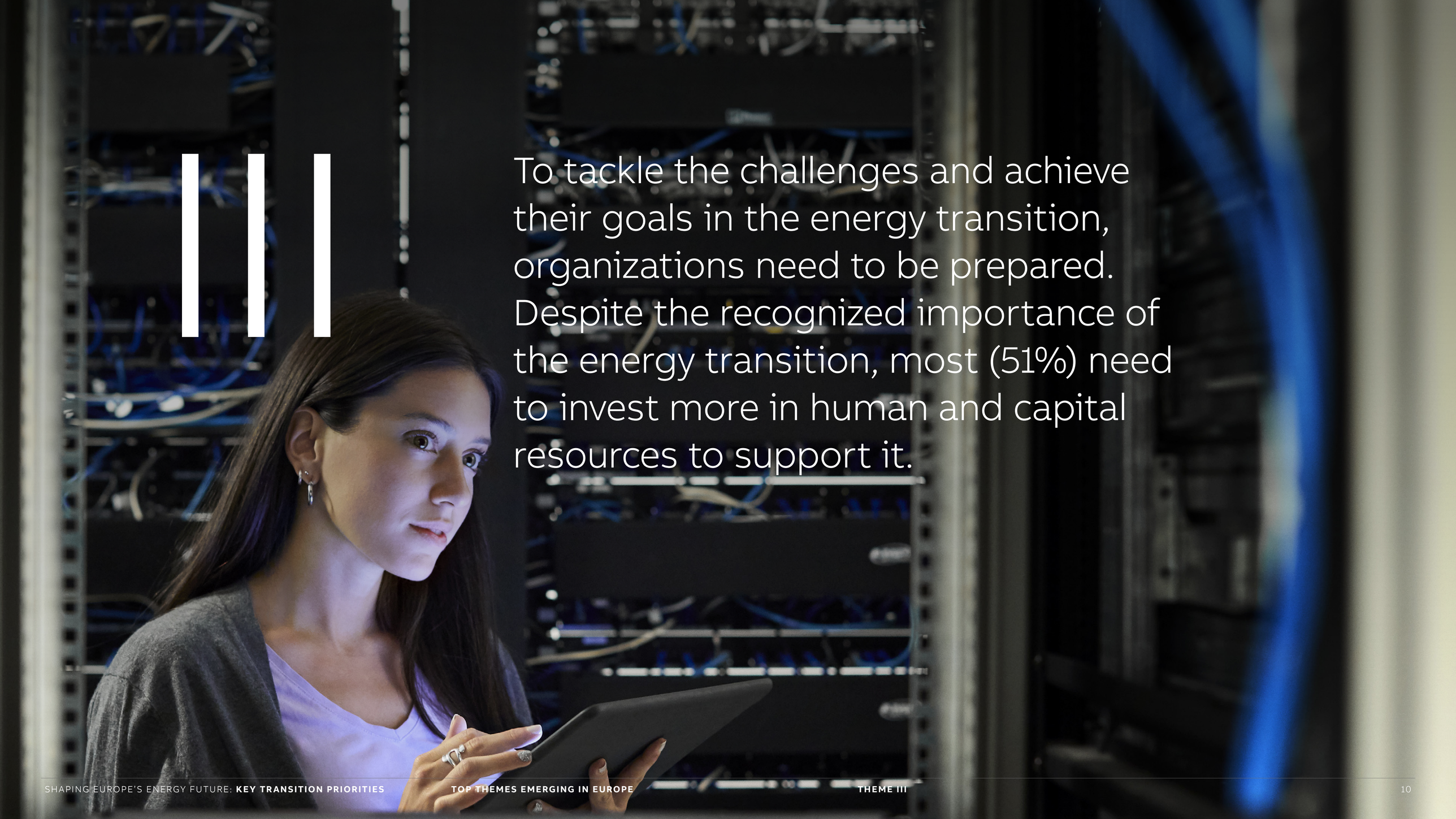
633 of survey respondents cited either **new/increasing regulations or pressure from customers/consumers** (NET)

622 of survey respondents cited either **create cost efficiencies or keep up with competitors** (NET)

WHAT ARE THE TOP CHALLENGES YOUR ORGANIZATION IS FACING, OR WILL FACE, RELATED TO THE ENERGY TRANSITION?

RESPONDENTS COULD CHOOSE MORE THAN ONE ANSWER





III

To tackle the challenges and achieve their goals in the energy transition, organizations need to be prepared. Despite the recognized importance of the energy transition, most (51%) need to invest more in human and capital resources to support it.

Survey results by country Page 25

More than half of the survey takers at energy utilities and more than half of industrial energy users cited the need for more resources. A higher percentage of respondents at chemical (65%) and oil and gas (56%) companies said their organizations need to make additional investments. Most data centers, on the other hand, are ready for the energy transition, as 87% said they are “fully resourced”.

Companies in Italy are especially struggling with resourcing planning, with 17% of these decision-makers reporting their company needs to invest “a lot more” in the energy transition, compared with 7% in Germany and 8% in France.

DOES YOUR ORGANIZATION HAVE ALL THE RESOURCES NEEDED FOR AN ENERGY TRANSITION?

65%

of respondents from chemical companies said their organizations need to make additional investments

56%

of respondents from oil and gas companies said their organizations need to make additional investments

87%

of respondents at data centers said that they are “fully resourced”

IV

Increasing demand, severe weather, aging infrastructure, and renewable growth make power supply, transmission, and distribution an increasingly complex balancing act.

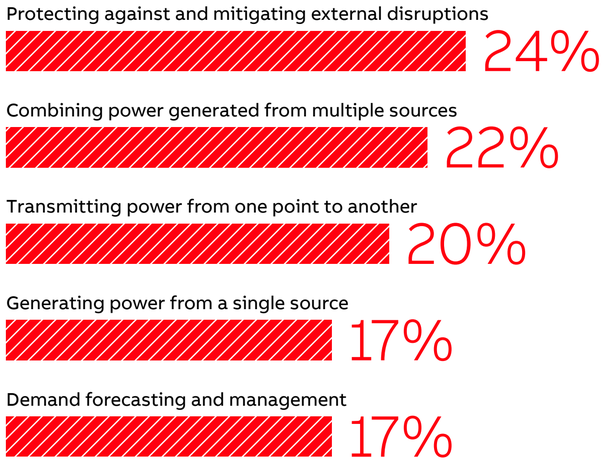
IV

Survey results by country Page 25

Protecting against and mitigating external disruptions like severe weather emerged as the most difficult facet of energy management. This is especially a big issue for data centers, as system downtime can be expensive and damage a business's reputation. 40% of respondents in this industry said protecting against external disruptions is the most challenging aspect.

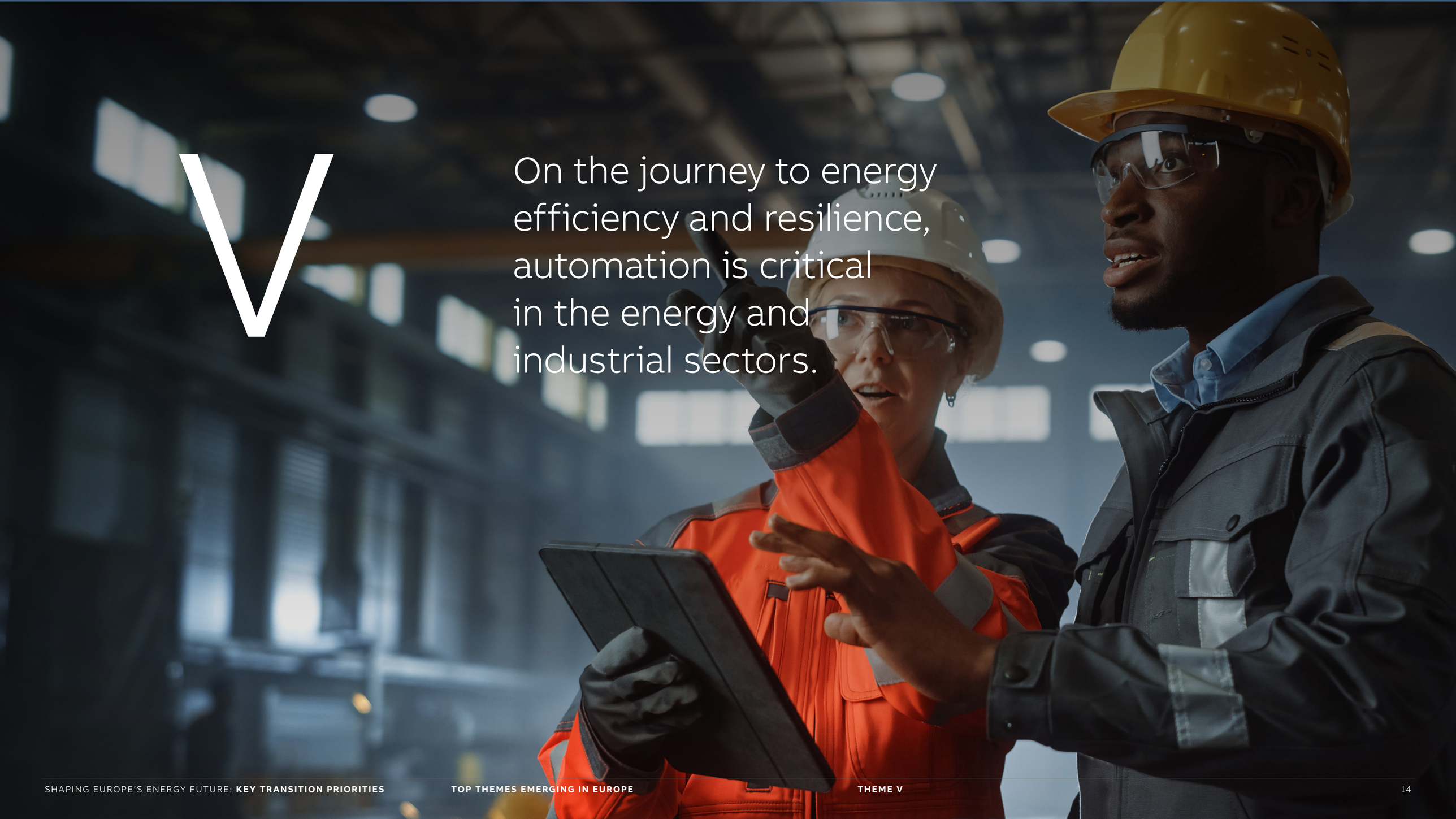
The growth of renewable energy sources has been good for the planet, but combining power generated from multiple sources was cited as the second most difficult aspect of energy management. Respondents in Italy and the U.K. marked this as more complex than protection against external disruptions.

WHICH ASPECT OF POWER CAPACITY HAS BEEN, OR WILL BE, THE MOST DIFFICULT FOR YOUR ORGANIZATION TO TACKLE?



V

On the journey to energy efficiency and resilience, automation is critical in the energy and industrial sectors.



V

Survey results by country Page 25 & 26

Two-thirds of respondents said using digital technologies and software solutions to automate and simplify facility monitoring and control is a priority. Automation is growing in importance at organizations making the energy transition their “top” priority in the next one to two years.

Demand for switchgear is increasing due to the increase in renewable energy, the growth in data centers, and grid modernization. Digitalizing switchgear and electrical distribution helps meet the needs for energy efficiency and continuity of service. “Smart” switchgear can constantly detect and analyze condition and maintenance needs by integrating multiple sensors and software to monitor utilization and operating cycles. Only 13% of survey takers said their organizations use smart switchgear with digital, connectable grid components and advanced functionalities.

But it’s clear a digital transformation is coming: Just 2% of all respondents said their companies are not considering digitalizing their switchgear right now.

When purchasing digitalized switchgear, the most critical factors in their decisions are technical support and training (15%), tied with service/maintenance contracts (15%).

HOW IMPORTANT IS AUTOMATING AND MONITORING THE CONTROL OF YOUR PLANTS TO YOUR ORGANIZATION’S STRATEGIC GOALS FOR THE NEXT 1-2 YEARS?

This is our top priority right now
18%

It’s one of several priorities for us
48%

We’d like to do this, but it’s not a priority
33%

It’s not a priority for us at all
1%

WHERE IS YOUR ORGANIZATION IN THE PROCESS OF DIGITALIZING YOUR SWITCHGEAR?

We’re already using a digitalized switchgear
13%

We’re working toward a digitalized switchgear
47%

We’re considering digitalizing our switchgear
38%

We’re not considering digitalizing our switchgear right now
2%

VI

Companies have several concerns about new regulations that will gradually eliminate the use of SF6 in medium- and high-voltage switchgear.

VI

Survey results by country Page 26

Its compact and robust design makes gas-insulated switchgear preferred in space-constrained urban areas, coastal regions, high altitudes, and polluted, harsh environments. Traditionally, GIS uses SF6 as the insulating medium, which is now being replaced by dry air and/or natural-origin gases to reduce the emissions potential. The U.K. and Norway are working on legislation similar to the EU ban. In the meantime, Norway has imposed a tax on SF6.

However, respondents said their adoption of SF6-free switchgear presents challenges, including the reliability of alternatives, the high initial investment cost, uncertainty around regulations, and the infrastructure investments required. In fact, 83% of respondents agreed that their organization would only switch to SF6-free switchgear if regulations in their country required it.

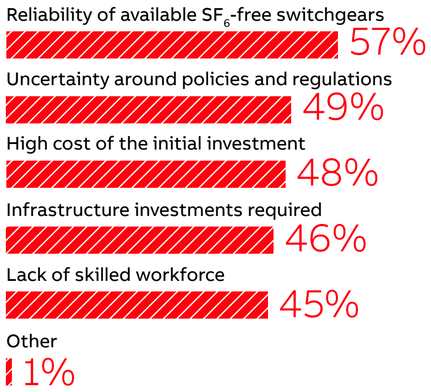
Despite its usefulness, SF6 is a potent greenhouse gas, with a global warming potential 24,300 times higher than CO_2.

83%

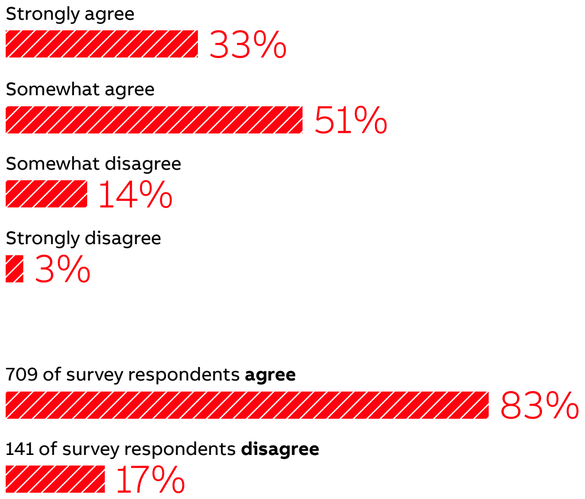
of respondents agreed with the statement that their organization would only switch to SF6-free switchgear if regulations in their country required it

WHAT CHALLENGES DOES, OR WOULD, YOUR ORGANIZATION FACE IN ADOPTING SF6-FREE ELECTRICAL SWITCHGEARS?

RESPONDENTS COULD CHOOSE MORE THAN ONE ANSWER



HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE STATEMENT BELOW? IT'S BETTER FOR MY ORGANIZATION AND THE INDUSTRY THAT WHATEVER GAS REPLACES SF6 IS STANDARDIZED.



Top Energy Trends Within Countries

Key Findings
France

Eight out of 10 purchase decision-makers in France said the energy transition is a priority, 10 percentage points higher than the results from all respondents. The importance shows France's leadership position on climate issues and an ambitious energy transition. France was one of the first countries to enact a climate law and already has a low-carbon electricity mix owing to its large nuclear fleet.

More than half of French respondents said their organizations need to make additional investments in the energy transition, which was a higher percentage than counterparts in other countries. French respondents are less concerned about how new and changing regulations could impact the energy transition than the entire survey pool.

The biggest challenge facing France's energy transition is controlling operational costs, followed closely by managing infrastructure investments and a lack of skilled workforce. They are not as concerned about cybersecurity risks in the digital transformation of their electrification systems as their counterparts in other countries.

More French respondents rated automation a priority, compared with all survey takers. 27% are using or completely prepared to transition to SF6-free switchgear, slightly higher than all survey takers.

56% say they need to make additional investments in the energy transitions, compared with **51% of all survey takers**

63% say they are at least somewhat concerned about new and changing regulations, compared with **69% of all survey takers**

72% say automation is a priority, compared with **66% of all survey takers**

60% are using or working toward digitalized switchgear

62% are concerned about the reliability of available SF6-free switchgear

Key Findings
Germany

The energy transformation in Germany, widely known as “Energiewende,” is the country’s planned transition to a low-carbon, nuclear-free economy. More than half of respondents in Germany (52%) said they were fully resourced for the energy transition, compared with 49% of all survey takers. However, 37% of them are “extremely” or “very” concerned about new and changing regulations impacting their organization’s plans for the energy transition, compared with 34% of all respondents. Shaping energy transition policy in Germany’s parliamentary systems is a complex process.

Even more so than France, German survey takers cited controlling operational costs as their organization’s biggest challenge in the energy transition. More than a quarter of respondents (28%) said protecting against and mitigating external disruptions was the most difficult aspect of power capacity, compared with 24% of all survey takers. They are also more concerned about cybersecurity risks in transitioning to digital distribution solutions for electrification.

Germany wants to reduce energy consumption by 20% by 2030. Nearly 70% of German respondents, a close second to France, said automation and monitoring the control of their plants is a near-term priority. One sign of this: 55% said they were working toward shifting to digital switchgear, compared with 47% of all survey takers.

Regarding the EU ban on SF6, respondents in Germany are not as concerned about a standard gas replacement. When asked if they agree or disagree that it’s better for their organization and the industry that whatever gas replaces SF6 is standardized, 75% agreed, compared with 83% of all survey takers.

71% say the energy transition is a priority

56% selected new or increasing regulations as a driver of the energy transition, more than the other five options

78% are at least somewhat concerned that new and changing regulations could impact their organization’s plans for the energy transition, compared with **68% of all survey takers**

65% are “very” or “extremely” concerned that their current cybersecurity measures will not be enough to protect the company as digitalization increases, compared to **56% of all survey takers**

69% said automation and monitoring the control of their plants is a near-term priority

67% are using or working toward implementing digitalized switchgear, compared with **60% of all survey takers**

Key Findings
Italy

Italy has made a lot of progress in its energy transition, boosted by a significant increase in renewable energy. After Russia's invasion of Ukraine sparked sharp price increases for energy commodities, the Italian government looked to strengthen its energy security.

For the first time, electricity production from renewable sources overtook production from fossil fuels during the first six months of 2024, according to Terna, the company that manages the Italian national electricity transmission grid.

60% of respondents in Italy said the energy transition is a priority, compared with 71% of all survey takers. Among energy utilities, 55% said it was a priority.

But companies in Italy are struggling with resources, with 17% of respondents reporting their organization needs to invest a lot more in the energy transition, compared with 8% of survey takers in France and 7% in Germany.

The biggest challenges facing companies in Italy in the energy transition are managing infrastructure investments (51%) and the lack of a skilled workforce (49%). Relating to power capacity, 29% said the most challenging aspect of power capacity is combining power generated from multiple sources, compared with 22% of overall survey takers.

40% of respondents in Italy said they are interested in automation, but it's not a priority. And only 48% said they were using or working toward digitalizing switchgear, the smallest percentage in the five countries surveyed.

56% said new or increasing regulations related to energy are driving their effort in the energy transition, compared with **52% of overall survey takers**

51% cited managing infrastructure investments as a top challenge, more than any other challenge listed

29% said combining power generated from multiple sources has been the most difficult aspect of power capacity

59% said automating and monitoring the control of plants is important to near-term strategic goals, compared with **66% of all survey takers**

19% are using or completely prepared to transition to SF6-free switchgear

Key Findings
United Kingdom

Nearly three-quarters of respondents in the U.K. said the energy transition is essential to their organization's near-term goals. Although the country is still highly dependent on natural gas to make electricity, the U.K. has emerged as a global leader in offshore wind energy. Wind is now responsible for about a quarter of the nation's electricity.

Unlike their counterparts in other countries, decision-makers in the U.K. most commonly cite pressure from employees or partners as a driver behind their company's efforts in the energy transition (51%). In comparison, fewer see new or increased energy regulations (42%) or creating cost efficiencies (39%) as a motivator. Changes in energy sources necessitate changes in how energy is stored. U.K. respondents cited energy storage as one of the top challenges (48%) in the energy transition, more so than controlling operational costs (43%) and managing infrastructure investments (41%).

The U.K. is further along than other European countries in digitalizing electrical components. 16% of respondents said they were using digital switchgear, compared with 13% of all survey takers. Companies in the U.K. are also ahead of the pack in adopting SF6-free switchgear, with 28% using alternative technologies or wholly prepared for the switch.

25%

said the energy transition is the top priority right now, compared with **23% of all survey takers**

42%

said new or increasing regulations were driving their efforts in the energy transition, compared with **52% of all survey takers**

52%

need to make additional investments in the energy transition

Cybersecurity, energy storage and controlling operating costs are the top challenges

The most difficult aspect of power capacity? A tie (24%) between combining power generated from multiple sources and transmitting power from one point to another

65%

said automating and monitoring the control of plants is a priority

95%

said they would prefer that whatever gas replaces SF6 be standardized

Key Findings
Norway

Norway is in a unique position concerning the energy transition. Almost all its electricity already comes from renewable sources. It's hardly surprising that only 60% of organizations in the country said the energy transition is a near-term priority, compared with 71% for all survey takers. At the same time, as a major oil and gas producer and exporter, Norway will need to support an evolution of the energy sector amid the global energy transition, according to the IEA.

Survey takers in Norway are paying attention to new or increasing energy-related regulations, with 65% saying it is driving their efforts. 63% said company leadership has a keen interest in the energy transition, too. Only one respondent out of 50 surveyed said their organization needed to invest a lot more.

Despite the abundance of hydropower, Norway still has ambitious goals for reducing greenhouse gas emissions. 60% of respondents said automation is a priority, and 16% use digital switchgear.

In 2023, Norway also instituted a tax on SF6 to help reduce its use and emission, and the government is working on a ban similar to the EU legislation. 22% of respondents said they were using SF6-free switchgear or completely prepared to make the switch. 64% noted they would only switch to SF6-free switchgear if regulations required it.

60% said the energy transition is a priority

54% said they are fully resourced

74% said they were at least somewhat concerned that new and changing regulations could impact their organization's plans for the energy transition, compared with **69% of all survey takers**

Keeping pace with regulations, cybersecurity, and controlling operational costs were the top three challenges

62% said they were using or working toward adopting digital switchgear

73% said the reliability of available SF6-free switchgear was a challenge, compared with **57% of all survey takers**

Survey results by country

Theme I

HOW IMPORTANT IS THE ENERGY TRANSITION TO YOUR ORGANIZATION'S STRATEGIC GOALS FOR THE NEXT 1-2 YEARS?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	200 100%	200 100%	200 100%	200 100%	50 100%
This is our top priority right now	45 23%	43 22%	47 24%	49 25%	8 16%
It's one of several priorities for us	117 59%	98 49%	72 36%	99 50%	22 44%
We're monitoring it, but it's not a priority	34 17%	53 27%	78 39%	51 26%	19 38%
It's not a priority for us at all	4 2%	6 3%	3 2%	1 1%	1 2%
Is a priority (NET)	162 81%	141 71%	119 60%	148 74%	30 60%

Theme II

WHAT IS DRIVING YOUR EFFORTS IN THE ENERGY TRANSITION?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	196 100%	194 100%	197 100%	199 100%	49 100%
New or increasing regulations related to energy	104 53%	108 56%	110 56%	84 42%	32 65%
Create cost efficiencies	104 53%	103 53%	84 43%	78 39%	27 55%
Leadership interest in it	87 44%	92 47%	89 45%	91 46%	31 63%
Pressure from employees or partners	85 43%	78 40%	75 38%	102 51%	19 39%
Keep up with our competitors	85 43%	83 43%	82 42%	90 45%	18 37%
Pressure from customers / consumers	77 39%	80 41%	75 38%	61 31%	21 43%
Pressure from employees/partners or leadership interest (NET)	141 72%	139 72%	139 71%	151 76%	41 84%
New/increasing regulations or pressure from customers/consumers (NET)	146 74%	154 79%	160 81%	132 66%	41 84%
Create cost efficiencies or keep up with competitors (NET)	154 79%	152 78%	141 72%	139 70%	36 36%

WHAT ARE THE TOP CHALLENGES YOUR ORGANIZATION IS FACING, OR WILL FACE, RELATED TO THE ENERGY TRANSITION?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	200 100%	200 100%	200 100%	200 100%	50 100%
Heightening our cybersecurity to reduce risks	92 46%	108 56%	96 48%	100 50%	28 56%
Controlling operational costs	102 51%	109 55%	91 46%	86 43%	27 54%
Managing the infrastructure investments required	99 50%	104 52%	102 51%	82 41%	22 44%
Lack of skilled workforce	100 50%	103 52%	97 49%	75 38%	22 44%
Challenges with energy storage	92 46%	90 45%	83 42%	96 48%	17 34%
Keeping pace with regulations	99 50%	80 40%	70 35%	89 45%	30 60%
Other		8 4%			
None of these		1 1%			

Survey results by country

Theme III

DOES YOUR ORGANIZATION HAVE ALL THE RESOURCES NEEDED FOR AN ENERGY TRANSITION?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	200 100%	200 100%	200 100%	200 100%	50 100%
Yes, we are fully resourced	88 44%	103 52%	99 50%	96 48%	27 54%
No, we need to invest a bit more	96 48%	83 42%	67 34%	81 41%	22 44%
No, we need to invest a lot more	16 8%	14 7%	34 17%	23 12%	1 2%
Need to make additional investments (NET)	112 56%	97 49%	101 51%	104 52%	23 46%

Theme IV

WHICH ASPECT OF POWER CAPACITY HAS BEEN, OR WILL BE, THE MOST DIFFICULT FOR YOUR ORGANIZATION TO TACKLE?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	200 100%	200 100%	200 100%	200 100%	50 100%
Protecting against and mitigating external disruptions	49 25%	55 28%	50 25%	39 20%	12 24%
Combining power generated from multiple sources	40 20%	38 19%	58 29%	47 24%	7 14%
Transmitting power from one point to another	42 21%	33 17%	37 19%	48 24%	11 22%
Generating power from a single source	35 18%	45 23%	20 10%	33 17%	10 20%
Demand forecasting and management	34 17%	29 15%	35 18%	33 17%	10 20%

Theme V

HOW IMPORTANT IS AUTOMATING AND MONITORING THE CONTROL OF YOUR PLANTS TO YOUR ORGANIZATION'S STRATEGIC GOALS FOR THE NEXT 1-2 YEARS?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	200 100%	200 100%	200 100%	200 100%	50 100%
This is our top priority right now	35 18%	34 17%	38 19%	40 20%	6 12%
It's one of several priorities for us	108 54%	103 52%	80 40%	90 45%	24 48%
We'd like to do this, but it's not a priority	54 27%	60 30%	80 40%	70 35%	20 40%
It's not a priority for us at all	3 2%	3 2%	2 1%		
Is a priority (NET)	143 72%	137 69%	118 59%	130 65%	30 60%

Survey results by country

Theme V

WHERE IS YOUR ORGANIZATION IN THE PROCESS OF DIGITALIZING YOUR SWITCHGEAR?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	200 100%	200 100%	200 100%	200 100%	50 100%
We're already using a digitalized switchgear	24 12%	24 12%	21 11%	31 16%	8 16%
We're working toward a digitalized switchgear	96 48%	109 55%	75 38%	95 48%	23 46%
We're considering digitalizing our switchgear	76 38%	62 31%	95 48%	74 37%	19 38%
We're not considering digitalizing our switchgear right now	4 2%	5 3%	9 5%		
Using or working toward a digitalized switchgear (NET)	120 60%	133 67%	96 48%	126 63%	31 62%

Theme VI

WHAT CHALLENGES DOES, OR WOULD, YOUR ORGANIZATION FACE IN ADOPTING SF6-FREE ELECTRICAL SWITCHGEARS?

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	185 100%	180 100%	192 100%	183 100%	44 100%
Reliability of available SF6-free switchgears	115 62%	109 61%	94 49%	94 51%	32 73%
Uncertainty around policies and regulations	90 49%	98 54%	90 47%	78 43%	28 64%
High cost of the initial investment	94 51%	95 53%	94 49%	73 40%	17 39%
Infrastructure investments required	86 46%	86 48%	83 43%	86 47%	16 36%
Lack of skilled workforce	82 44%	85 47%	87 45%	76 42%	23 52%
Other		7 4%			
We do not/would not face any challenges in adopting SF6-free switchgears		7 4%			
Would face challenges adopting SF6-free switchgear (NET)	185 100%	179 99%	192 100%	183 100%	44 100%

HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE STATEMENT BELOW? IT'S BETTER FOR MY ORGANIZATION AND THE INDUSTRY THAT WHATEVER GAS REPLACES SF6 IS STANDARDIZED.

Country	France	Germany	Italy	United Kingdom	Norway
Participants Participated	200 100%	200 100%	200 100%	200 100%	50 100%
Strongly agree	55 28%	64 32%	74 37%	73 37%	12 24%
Somewhat agree	112 56%	85 43%	100 50%	116 58%	18 36%
Somewhat disagree	30 15%	47 24%	19 10%	5 3%	17 34%
Strongly disagree	3 2%	4 2%	7 4%	6 3%	3 6%
Agree (NET)	167 84%	149 75%	174 87%	189 95%	30 60%
Disagree (NET)	33 17%	51 26%	26 13%	11 6%	20 40%

Conclusion

While there is undeniable momentum in the energy transition, especially in renewable energy adoption and electrification, significant challenges remain. Europe is still heavily reliant on fossil fuels. The pace of transition is similar across five of the biggest economies in Europe. Achieving the global targets set by the Paris Agreement will require accelerated efforts across all sectors.

Methodology

The ABB Survey was conducted by **Wakefield Research** (www.wakefieldresearch.com) among 850 switchgear and electrification purchase decision-makers in the U.K., France, Italy, Germany, and Norway, with a minimum seniority of manager working at companies that buy switchgear and electrification components, between August 2nd and August 12th, 2024, using an email invitation and an online survey.

The results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of interviews and the level of the percentages expressing the results. For the interviews conducted in this particular study, the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 3.4 percentage points in the global sample, 13.9 percentage points in Norway, and 6.9 percentage points in the remaining markets from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample.

Certain questions allowed respondents to choose more than one answer. All responses were rounded to the nearest whole number. Responses will not always add up to an even 100%.