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Imprint

Energy Transition Barometer 2023 of the IHK organisation – Business survey on the implementation of energy transition and climate protection

The annual "Energy Transition Barometer of the Chamber of Industry and Commerce Organisation" summarises the results of an online business survey in which entrepreneurs who are voluntarily involved in the Chamber of Industry and Commerce committees and other member companies of the Chamber of Industry and Commerce Organisation have participated. The aim of the energy transition barometer is to obtain a comprehensive assessment of the companies regarding the progress of the energy transition and the current climate and energy transition policy.

The evaluation is based on 3,572 responses received. This is an even higher participation than last year's high response. The responses are mainly distributed among the economic sectors industry (34 percent) and services (46 percent), trade (14 percent) and construction (6 percent) are somewhat less affected thematically and accordingly less strongly represented.

In regional terms, the responses this year come particularly strongly from the West – 45 percent, with the other three regions being 14 percent from the North of Germany, 16 percent from the East and 24 percent from the South. The states of Bremen, Hamburg, Lower Saxony and Schleswig-Holstein are attributed to the North, the states of Hesse, North Rhine-Westphalia, Rhineland-Palatinate and Saarland to the West, the states of Berlin, Brandenburg, Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia to the East and Baden-Württemberg and Bavaria to the South.

The survey took place from 12 June to 2 July 2023.

German Chamber of Industry and Commerce (DIHK) - Berlin 2023

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Stand August 2023

Cover © Getty Images/Wolfgang Weinheupl

Graphic Friedemann Encke, DIHK

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1. Energy Transition Barometer 2023: Historically poor result

The eleventh IHK Energy Turnaround Barometer takes place in an environment where energy prices have calmed down somewhat compared to autumn and after a mild winter. However, the war in Ukraine continues and creates an economic environment full of risks and uncertainties. Currently, longer-term prices for gas and electricity are at several times their pre-crisis levels, i.e. they are, compared to the long-term average, twice or even three times higher. In the long term, end-customer prices for electricity in particular will remain at a high level in international comparison. Even a temporarily low level of short-term market prices does not change this. For currently 83 percent of the companies, electricity prices have risen in the past 12 months (Fig. 1).

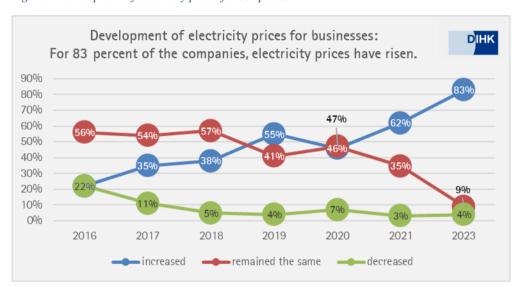


Figure 1: Development of electricity prices for companies

With the elimination of nuclear energy, the phase-out of coal-fired power generation, new expensive gas-fired power plants and rising grid fees, the energy issue will become a burden for Germany as a business location in the longer term. The development of new renewable energy and water sources is progressing too slowly.

The central question of the IHK Energy Barometer is: How do you assess the impact of the energy transition on the competitiveness of your company? The approximately 3,500 companies answer this question with an unprecedented negative assessment – across all sectors, company sizes and regions, the companies rate the impact of the energy transition at minus 27 on a scale from minus 100, "very negative", to plus 100, "very positive" (Fig. 2).



Figure 2: Energy Transition Barometer 2023

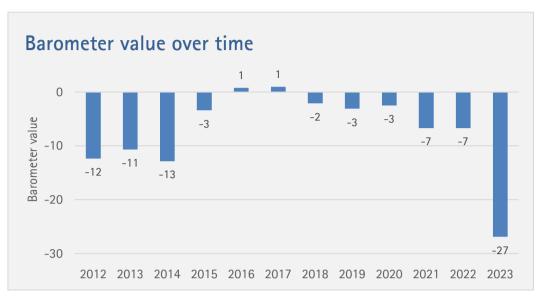


Figure 3: Barometer value over time

Compared to all previous barometer readings, this year's is particularly poor. Last year and the year before, the value was still a moderate minus 7; before that, it was never worse than minus 13 (Fig. 3).

In a sector comparison, industrial companies are the most critical of the energy transition (Fig. 4). The barometer score in industry this year is minus 38 (previous year: minus 14). In energy-intensive industry it is even minus 55 points. On the one hand, this is due to their being affected by the high energy prices in Germany. Electricity prices in particular are of outstanding importance for industry, not least because the company's climate protection targets can only be achieved with large quantities of cheap green electricity.

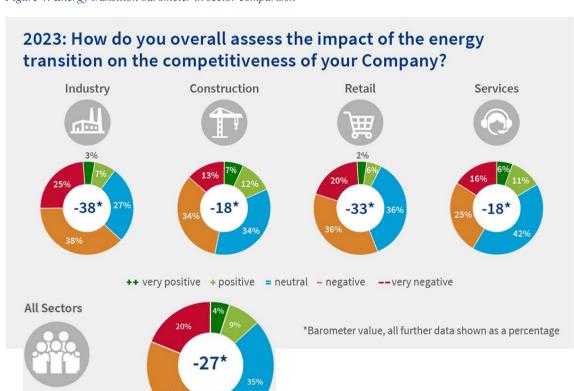


Figure 4: Energy transition barometer in sector comparison

Trading companies are also very sceptical about the energy turnaround in Germany. With minus 33 points, a negative record has been reached here as well; last year it was minus 15. Retail companies are excluded from most support measures in the energy sector because they are less exposed to international competition. In some cases, margins in the retail sector are low, so a high electricity price quickly becomes a cost trap for trading companies. The density of regulation is increasing, especially in the retail sector, and the reluctance to consume due to high energy prices is clearly noticeable for retailers.

Last year, the construction industry was similarly critical of the energy transition as the average company. This year, the assessment of energy policy developments is significantly more negative. While the barometer value in 2022 was minus 7 after plus 2 in 2021, it has now fallen to minus 18 this year. The construction industry is particularly affected by the high raw material prices and the shortage of skilled workers. However, it also benefits from investments in energy-efficient refurbishment.

The situation is similar in the service industries – the barometer value shows a decline from zero in the previous year to minus 18. On the one hand, many service providers are affected by the uncertainty and the reluctance of customers to place orders; on the other hand, they benefit from orders related to the energy transition and can themselves switch to renewable energies comparatively easily.

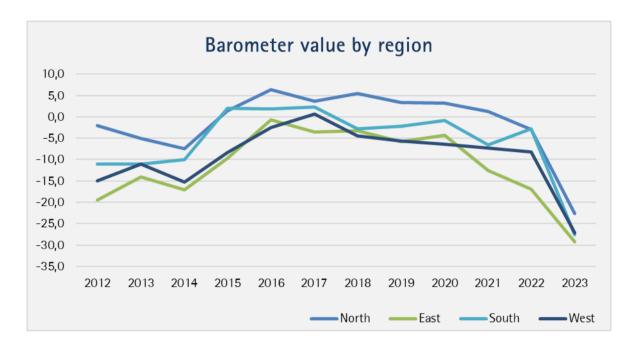


Figure 5: Barometer value according to sectors

Looking over time, we see the strong negative trend in all sectors (Fig. 5). Concerns about sufficient and affordable energy supply are now present in the economy as a whole. While industrial companies have always been sceptical, all sectors across the board are now affected by uncertainty and high prices. The reasons are not to be found in politics alone, but in the real framework conditions of energy supply. Russia's war against Ukraine has made the conditions for transformation more difficult. However, despite price brakes and LNG terminals, politics has not succeeded in cushioning the negative mood. Instead, they have created new burdens with expiring relief, sluggish grid expansion or regulations that are far removed from practice, such as in the Building Energy Act or the Energy Efficiency Act.

In a comparison of regions (Fig. 6), it is noticeable that the assessments regarding the energy transition do not vary greatly. In all regions there is an equal drop-off in the assessments.

Figure 6: Barometer value by region



The East remains the frontrunner in terms of scepticism towards energy policy, closely followed by the South and West. In the north there are not much more positive assessments than in the other regions. But especially in the South the assessment drops from minus 2.8 to minus 27.5. Here infrastructure problems, risks of industrial production and political framework conditions come together.

2. Relocation as a reaction to energy policy

In industry, the plans to relocate are intensifying. Almost one third of the industrial companies (31.7 percent) are planning or realising the relocation of capacities abroad or the restriction of production at home as a reaction to the energy policy framework conditions. This is a doubling compared to last year – at that time 16 percent of the industrial enterprises reported planned or realised capacity relocations abroad. As last year, a good half are only planning, while the rest have already completed or are in the process of doing so (Fig. 7). Against the background of these figures, a strengthening of the location is urgently needed.

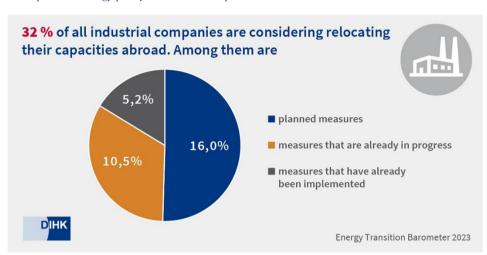


Figure 7: Measures in response to energy policy - industrial companies

The migration tendencies are most pronounced among the larger industrial companies (500 employees or more). Here 43 percent of the companies that participated in the survey are already planning or relocating. These companies are often closely interlinked with foreign countries and face particularly strong location competition. High energy and raw material prices contribute to less competitive production costs in Germany. Almost two-thirds of the measures are already underway or have been completed – the relocation or reduction of production at home is therefore in full swing (Fig. 8).

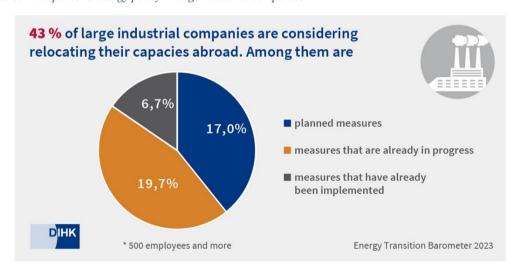


Figure 8: Measures in response to energy policy - Large industrial companies

The very specific relocation plans show that the energy policy and economic location conditions for industry in Germany in particular have become difficult. The discussion about the industrial electricity price and the planned massive expansion of renewable energies are attempts to provide relief and ensure lower electricity prices. But so far it is not reaching the breadth of companies or is simply taking too long.

3. Impact of energy prices on investments

The impact of energy prices on investment capacity is increasing (Fig. 9). All investment areas – climate protection, research and innovation as well as core operational processes – are more affected by restrictions than last year. Only a quarter of the companies see no impact, the service sector even sees itself as unaffected with 34 percent.

Industry, and especially energy-intensive industry, is cutting back its investments particularly sharply. Investments in core processes, i.e. central replacement or expansion investments, are conspicuously affected by the restraint. One-third of all companies are cutting back on these investments due to the high energy costs. In energy-intensive industry, almost half of the companies are limiting their investments in this area. This is the opposite of an investment upswing that would be necessary to overcome the current crises.

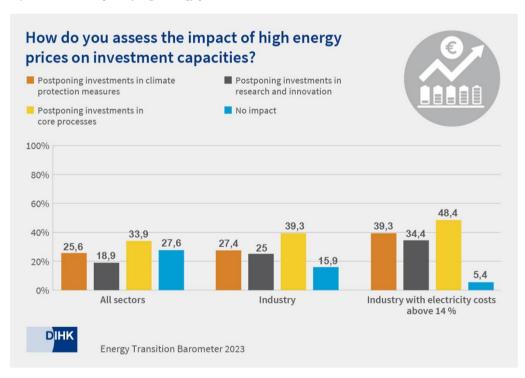


Figure 9: How do you assess the impact of high energy prices on investments?

The situation with climate protection investments is also precarious. They are the second most affected by high energy costs and are being cut back by a quarter of companies in the overall economy – and equally in northern, southern, eastern and western Germany – and almost 40 percent in energy-intensive industry.

At least investments in research and innovation are somewhat less affected. But here, too, 20 (overall economy) to 34 percent of companies (energy-intensive industry) are cutting back their investments.

4. Barriers to transformation: Reliability of energy policy is lacking

This year, a clear result emerges with regard to the obstacles to transformation: a lack of information or predictability and reliability in energy policy move to the top of the list of obstacles to transformation, with almost two-thirds of the companies naming them (Fig. 10). The multitude of new rules and regulations and the hectic pace of legislation in the last and this year are reflected in these responses. The problem pressure is particularly high among medium-sized companies (250 to 500 employees), 67 percent see this problem; large industrial companies with more than 500 employees are also strongly affected (62 percent).

Compared to last year, the high level of bureaucracy continues to be rated very critically. The level of concern has increased once again compared to last year. 58 percent of companies see this as a burden – equally in all sectors – closely followed by slow planning and approval procedures, which particularly affect the construction industry.

High energy costs are also an obstacle to transformation for three out of ten companies because they limit the funds available for investments in climate protection. Even more important is the shortage of skilled workers, which plays a role for one third of the companies, with an increasing trend. The construction and service sectors see themselves as particularly affected here.

Difficulty in raising capital is still an obstacle for 15 percent of companies. Compared to last year, there is a slight easing here.

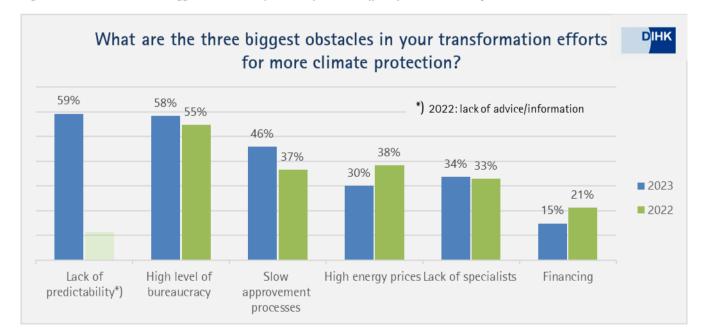


Figure 10: What are the three biggest obstacles in your transformation efforts for more climate protection?

¹ Last year, the question only referred to the lack of counselling or information, so the figures are not comparable.

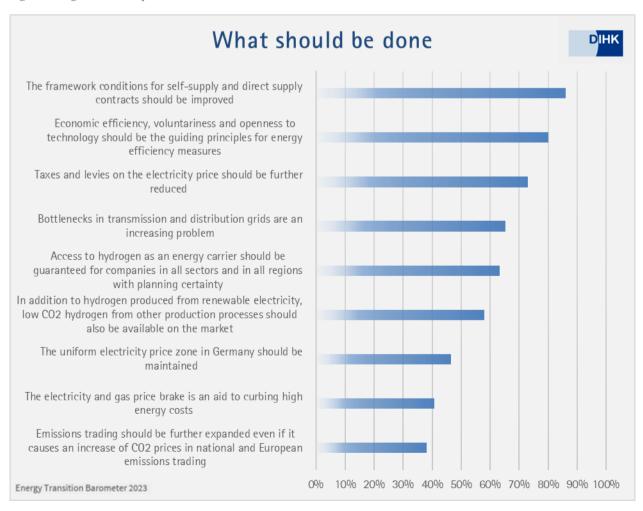
5. Recommendations of the business community to the Federal Government

More voluntarism in efficiency measures in first place

In view of the challenging transformation, two topics in particular receive undivided approval from over 80 percent of the companies: economic efficiency, voluntariness and openness to technology should be the guiding principles for energy efficiency measures and the framework conditions for self-supply and direct supply contracts should be improved in order to make the energy transition secure, affordable and environmentally compatible. In third place comes strong support for further reducing taxes and levies on the electricity price (Fig. 11).

Bottlenecks in transmission and distribution grids as an increasing problem are also seen by the companies with a high level of agreement. Grid expansion thus remains a central task of energy policy. More than 63 percent of the companies agree that access to hydrogen as an energy carrier should be guaranteed for companies in all sectors and in all regions with planning certainty. In addition to hydrogen produced from renewable electricity, low CO₂ hydrogen from other production processes should also be available on the market, demand 58 percent.

Figure 11: Agreement with political statements



Almost 50 percent of the companies are of the opinion that the uniform electricity price zone in Germany should be maintained and that the electricity and gas price brake is an aid to curbing high energy costs. 38 percent of the companies call for an expansion of emissions trading.

In detail

More than 80 percent of companies agree that cost-effectiveness, voluntariness and openness to technology should be the guiding principles for energy efficiency measures (Fig. 12 left); this is particularly important for industry, but agreement is high across all sectors and size classes of companies. Likewise, a large majority calls for an improvement in the framework conditions for self-supply and direct supply contracts (Fig. 12 right).

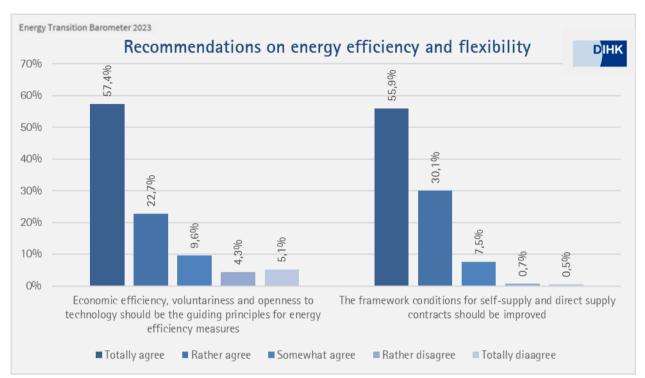


Figure 12: Recommendations on energy efficiency and flexibility ²

Improvements in self-supply and direct supply contracts are seen as particularly important by companies in the South and in industry, with almost 90 percent agreement.

² Note: Companies were able to indicate "no assessment" as a further response option, but this is not shown in the figures for reasons of clarity.

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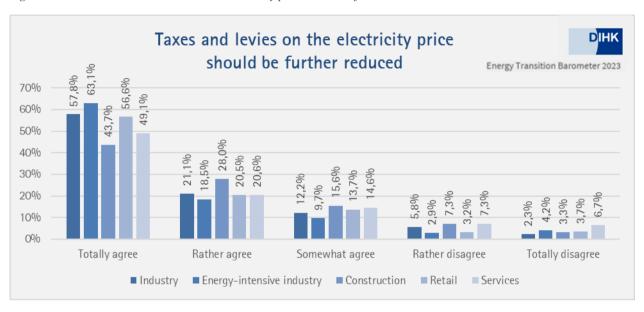


Figure 13: Measure: Taxes and levies on the electricity price should be further reduced

Across all sectors, companies recommend further reducing taxes and levies on the electricity price. In view of the fact that they are greatly affected by high electricity prices, energy-intensive industry in particular (81.6 percent agreement) hopes that such measures will provide relief (Fig. 13).

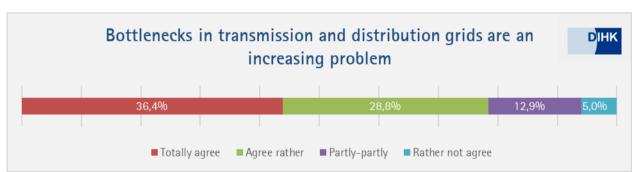
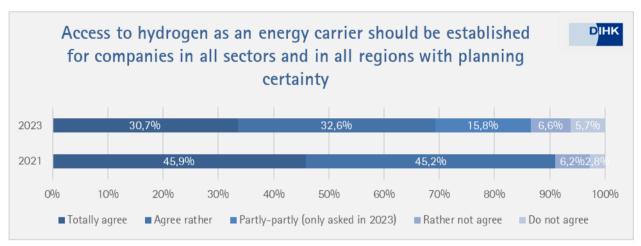


Figure 14: Measure: Transmission and distribution congestion is an increasing problem

Two out of three companies (65 percent) point out that the problem of bottlenecks in transmission and distribution networks is increasing (Fig. 14). Only 2.4 percent of the companies disagree with this assumption. This confirms the urgency of grid expansion as a central prerequisite for successful transformation, especially in the south of the republic, where concern is particularly high at 67 percent, and somewhat less pronounced in the east at 61 percent.

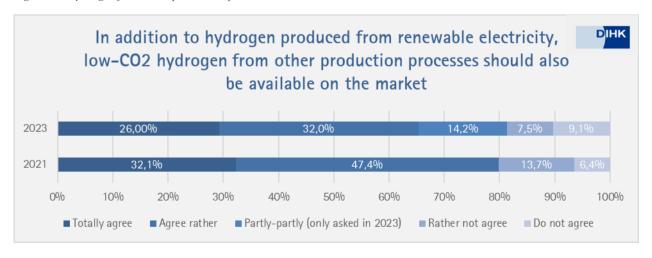
As early as 2021, the companies called on politicians to take the lead in hydrogen and to offer access to hydrogen as an energy carrier in all regions and all sectors. This demand remains valid in 2023 (Fig. 15). In a regional comparison, the demand is above average in the electricity-intensive economy and in the West (40 and 34 percent undivided agreement) and below average in construction and the East (25 percent undivided agreement in each case). Even in the less affected sectors, however, well over 50 percent of the companies consider a nationwide hydrogen supply to be important.

Figure 15: Access to hydrogen



The same applies to the discussion on the so-called colour theory: the majority of companies are in favour of low CO_2 hydrogen from other than renewable energy sources also being available on the market (Fig. 16), and the energy-intensive companies consider this demand to be particularly important with over 30 percent undivided agreement - an indication of urgently needed progress in this debate.

Figure 16: Hydrogen from other production processes



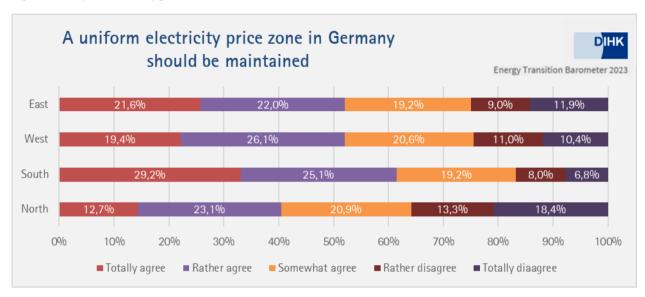


Figure 17: Uniform electricity price zone

Against the backdrop of the discussion about new electricity price zones in Germany, companies from the south of Germany in particular call for the preservation of a uniform electricity price zone (54.3 percent). In the north of Germany, 31.7 percent of the companies are in favour of different electricity price zones, yet 35.8 percent of the northern German companies also call for the preservation of a uniform zone (Fig. 17).

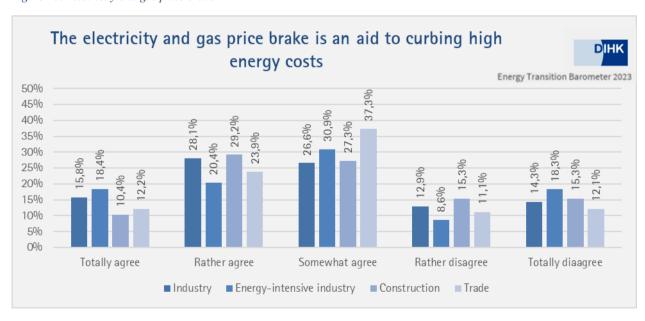
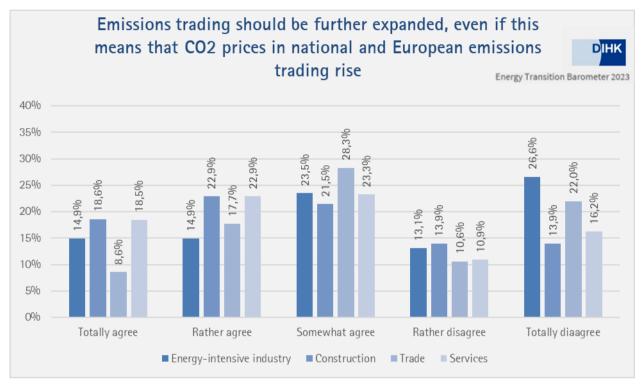


Figure 18: Electricity and gas price brake

The electricity and gas price brakes have been in force since January 2023. Overall, there is conspicuously little agreement that the energy price brakes help to curb energy costs. Only one-fifth to one-fourth of the companies give the instrument their undivided approval – a similar number of companies see no help at all in the price brakes. The midfield of those with low approval is the most pronounced (Fig. 18). High approval is found in two groups in particular: Among industrial companies with less than 500 employees and among companies with a high share of

energy costs. But even here, undivided approval rates are only reached by 18 (medium-sized industry) and 21 percent (electricity cost share over 14 percent). At the same time, the lack of agreement is particularly pronounced among companies with high electricity costs, at 21 percent. One reason for this is certainly the complex conditions of utilisation. It could also play a role that many companies only received noticeable relief payments in the middle of the year.





The further expansion of emissions trading received divided approval among the political demands. 38.1 percent of the companies were completely or partially in favour of an expansion, with companies from the construction industry and the service sector in particular supporting this demand. Trading companies and energy-intensive companies tended not to agree or did not agree with the demand (Fig. 19).

Annex: Questionnaire

Survey period: 12 June to 2 July 2023.

Introduction

Since the Russian attack on Ukraine, two pillars of German energy policy have fallen away: relatively cheap Russian pipeline gas as a bridge into the age of renewable energies and a secure supply of energy for the German economy. Added to this are the tightened climate protection and energy efficiency targets and the political mandate directed at every company to become climate neutral itself. The pace of new laws and directives is and remains high – with far-reaching effects on companies.

These points result in an advisory mandate of the CCI organisation vis-à-vis politicians in Berlin, Brussels and at the state level. This is why we created the Energy Transition Barometer with this survey. Information from your companies helps us to better advise politicians.

We ask you to participate in our online survey. Your information will be treated strictly confidentially. The results will be published in summer 2023. You can access the results of the Energy Transition Barometer 2022 here.

Thank you in advance for your support! Answering the questions will take about 15 minutes.

Part I: Four Statistics Questions

Please first answer four short questions about your company, as without these we will not be able to make an evaluation.

2. Which industry does your company belong to?

Industry

Construction

Retail

Service

1. How many employees does your company have?

0 - 9

10 - 19

20 - 249

250 - 499

500 - 999

over 1000

3. How high are your energy costs/electricity costs as a proportion of turnover?

Response categories: 0 - 2 % 2 - 4 % 4 - 14 % 14 % and more

Total energy (including heating and fuel costs) Electricity costs

4. do you mainly use your own buildings for your business activities?

yes

no.

Part II: Four policy questions

1. How do you assess the impact of the energy transition on the competitiveness of your company?

very positive positive neutral negative very negative No assessment possible

2. How do you assess the impact of high energy prices on investments?

The higher expenses due to electricity costs and/or gas prices lead overall to: (multiple answers possible)

Loss of competitiveness of the company in Germany as a business location

Deferral of investments in climate protection measures

Deferring investment in research and innovation

Deferring investments in core processes

No effects

Other (free text)

3. What are the three biggest obstacles in your transformation efforts for more climate protection?

Skills shortage high energy costs

Lack of information or predictability and reliability in energy policy

difficult financing

slow planning and approval procedures

Too much bureaucracy

Other

4. To what extent do they agree with the following political measures to make energy transition and climate protection safe, affordable and environmentally compatible?

Response categories: Fully agree Somewhat agree Partly agree Somewhat disagree Disagree No assessment

- 1 Taxes and levies on the electricity price should be further reduced.
- 2 The electricity and gas price brake is an aid to curbing high energy costs.
- 3 Access to hydrogen as an energy carrier should be established for companies in all sectors and in all regions with planning certainty.
- 4 In addition to hydrogen produced from renewable electricity, low-CO2 hydrogen from other production processes should also be available on the market.
- 5 Economic efficiency, voluntariness and openness to technology should be the guiding principles for energy efficiency measures.
- 6 The framework conditions for self-supply and direct supply contracts should be improved.
- 7 Emissions trading should be further expanded, even if this increases CO2 prices in national and European emissions trading.
- 8 The uniform electricity price zone in Germany should be maintained.
- 9 Bottlenecks in transmission and distribution grids are an increasing problem.

Space for additions (free text field)

Part III: Eight questions on fields of action in the energy transition

1. How have your electricity and energy prices developed over the past twelve months?

Response categories: not relevant - increased - remained the same - decreased

Electricity prices

Energy prices except electricity (gas, district heating, heating oil, petrol, diesel)

2. How has the importance of the following aspects developed for your business in the last twelve months?

Response categories: Importance increased - Importance remained the same - Importance decreased - No assessment possible

Fluctuations in energy prices Energy saving Disturbances in the power supply Faults in the gas supply

3. Did you have specific problems with the security of supply in the last twelve months and if so, what were they? (Multiple answers possible)

No concrete problems
Power outages less than 3 minutes (number)
Power outages over 3 minutes (number)
Gas supply interruptions
Termination of contract by supplier
Production was affected
Other (free text field)

4. What internal measures is your company taking in view of the changes in the energy industry and policy?

Response categories: Not specified - Planned measure - Measure already in progress - Measure already implemented - No measure planned

Energy supply

Change of supplier/supplier

Conclude long-term supply contracts (>= 3 years)

Short-term procurement

Increasing energy efficiency

Protection against power failures (e.g. through emergency generators or storage)

Building our own renewable energy generation capacity

Heat supply (process and space heat)

Switch to lower-CO2 heat generators or electricity (heat pumps)

Use of waste heat

Predominant use of renewable energies (e.g. biomass, geothermal energy)

Use of hydrogen

Mobility

Acquisition of electric vehicles

Development of a charging infrastructure for electric vehicles

Acquisition of vehicles with other alternative propulsion systems (e.g. hydrogen)

Carbon footprint - Calculation of own carbon footprint according to a recognised standard (e.g. Greenhouse Gas Protocol) taking into account:

Scope 1 (consideration of direct emissions at the site, especially use of fuels)

Scope 1 and Scope 2 (consideration of indirect emissions from the purchase of electricity, steam, district heating)

Scope 1 to 3 (consideration of indirect emissions along the value chain, e.g. purchased goods and services, business trips, commuters, logistics)

Other (free text)

5. What measures with external impact is your company taking in view of the changes in the energy industry and policy?

Response categories: Not specified - Planned measure - Measure already in progress - Measure already implemented - No measure planned

Opening up new business areas due to the energy transition

Opening up new sales markets abroad

Focus on climate-friendly products/services

Procurement: Switching our own supply chain to climate-friendly primary products

Passing on additional energy costs to customers

Relocation of capacities abroad/restriction of production at home

6. More on the topic of energy efficiency and self-generation: What measures do you take to increase energy efficiency in your company? (Multiple answers possible)

Use of an energy management system (ISO 50001)

Use of an environmental management system (EMAS or ISO 14001)

Energy audit according to DIN EN 16247-1 / alternative system

Involvement of external service providers (consultants, contractors)

Participation in energy efficiency networks

Qualification of trainees as energy scouts

Investments in efficient technology (e.g. replacement of electric motors, lighting, compressed air, etc.)

Energetic building refurbishment

Digitalisation and automation of measurement infrastructure and control processes

7. What economically realisable savings potentials in final energy consumption (electricity, heat & fuels) do you see in your company in the next five years? How high do you estimate the economically realisable potential for waste heat utilisation in the next five years?

Response categories: none 0 - 2% of energy consumption 2 - 5% of energy consumption 5 - 10% of energy consumption more than 10% of energy consumption

Total final energy Waste heat Power Gas

Climate protection

8. Has your company set itself the goal of becoming climate neutral?

yes, already climate neutral yes, until 2030 yes, until 2040 no

End

You have reached the end of the survey. Thank you very much! If you would like to tell us anything else, please feel free to do so here.

(Free text)