

# **German Energy Policy – a Blueprint for the World?**

## ***Full Results***

World Energy Council - Germany

# Blueprint Survey—International Perspectives on Germany's Energy Transition

Germany is in the midst of a broad and ambitious energy transformation – its “Energiewende.” The German Energiewende aims to transition Europe’s largest economy to one that is nuclear-free and almost carbon-neutral by 2050. A transition of this size touches every aspect of German society and the economy.

We believe that gaining international insight can help the Energiewende, even with its challenges, become a success. Every two years, the World Energy Council-Germany conducts its global *Blueprint* survey to gauge the perception and impact of Germany’s energy policies abroad. This year, we have compiled the largest pool of respondents since the survey began in 2011. Nearly 120 energy professionals from over 60 countries provided their views on Germany’s transition and the energy landscapes of their own countries.

## Closely, but Critically, Watched

Our findings show that the German energy transition continues to be closely watched around the world, and in some cases, has had a concrete impact on local discussions and policies. Respondents are clear-eyed about the difficulty in reaching such an ambitious target, with only a quarter believing Germany can fully meet its 2050 climate goals. There are also instances where our closest neighbors showed the most pessimism. EU respondents, for example, were quite critical of the Energiewende’s impact on Germany’s economic power.

## Global Drivers of Energy Transitions Vary, as Will Paths

Regarding the global drivers of the energy transition, we found that countries within the European Union are motivated primarily by climate change concerns. However, those outside the EU were primarily focused on economic growth and energy security.

Ultimately, the title of this report brings us back to a critical question: Can the German Energiewende serve as a blueprint for the world? Here again, we see a divide between EU and non-EU respondents, with only 11% of those in the EU saying it serves as a blueprint, versus 43% of those outside the EU. There is no clear roadmap. However, what works – or hasn’t – for Germany can help inform ambitious policies elsewhere.

Our hope is that Germany’s actions help inspire energy transitions world-wide. In turn, we can use the feedback from the *Blueprint* to gain our own inspiration in creating a sustainable and just energy transition.

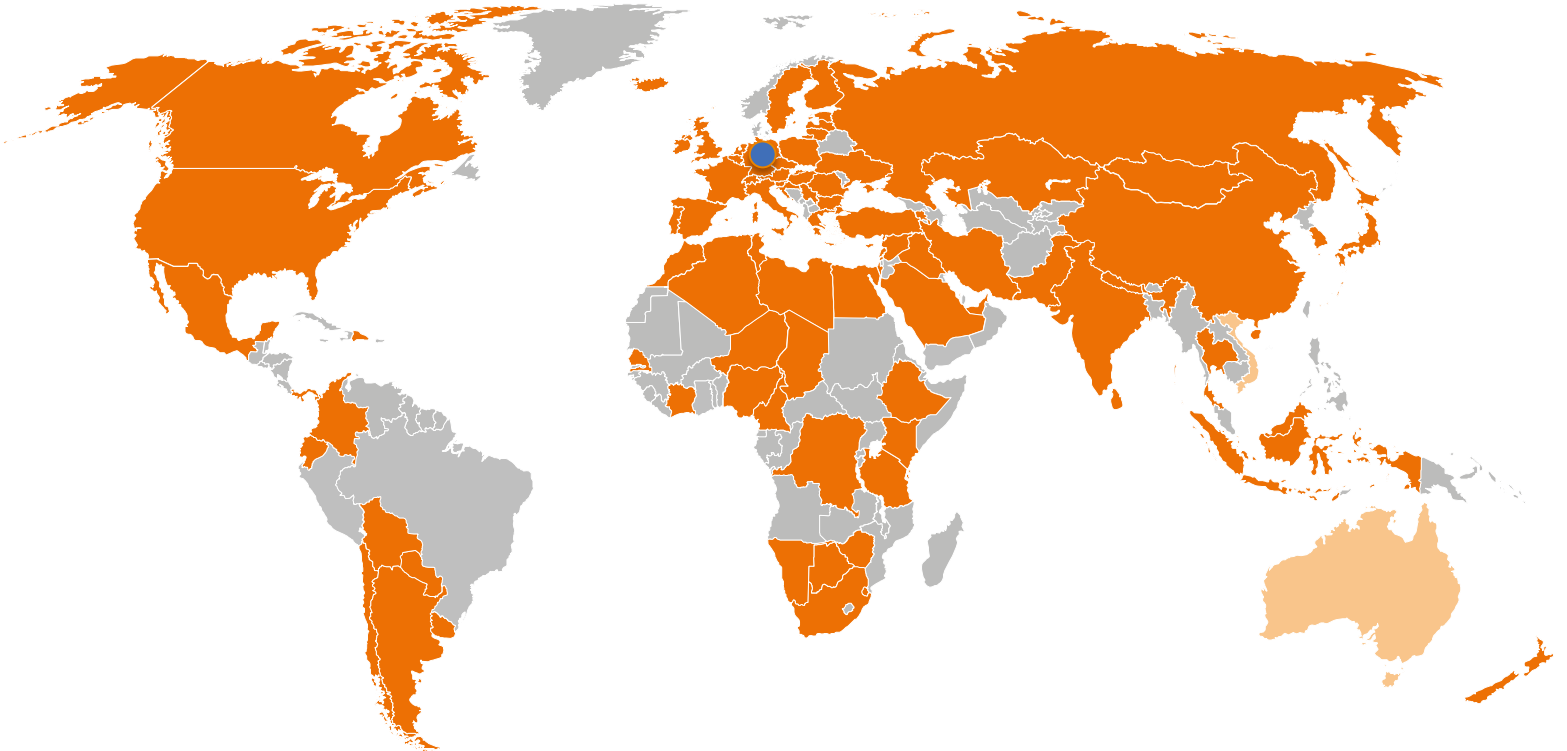


*Sincerely,*

*Carsten Rolle  
Managing Director  
World Energy Council  
-Germany*

# World Energy Council – Germany

- ▶ German Committee of the World Energy Council, a global network of members representing the whole energy system
- ▶ Office in Berlin
- ▶ More than 60 companies, associations and agencies of the energy sector are members
- ▶ Own publications, events, press talks...



We provide **fact-based** information about energy topics and give attention to the **global** aspects of energy and environmental policies in the national debate. We are **politically independent** and **neutral** towards energy sources and industries.

# Respondents Provide a Global Perspective

- **Nearly 120 Energy Professionals**
- **Representing Over 60 Countries from\*:**

-Europe (41%)

-Middle East (5%)

-South America (19%)

-North America (4%)

-Africa (15%)

-Caribbean and Central America (3%)

-Asia and Pacific (11%)

\* Percentages represent the locations of 119 energy experts surveyed. The survey results presented in the following slides contain composite results per country. Please see appendix for full country list.

# Survey Highlights



For **77%**, Germany's policies are observed or have a direct impact on decisions and discussions in their countries



**25%** say Germany can **fully meet** its 2050 climate goals



**11%** of EU experts see Energiewende as a **Blueprint for the world** versus **43%** of non-EU experts



**Climate Protection** drives EU energy transition; **Economic Growth** drives transition outside EU



**56%** of EU experts say energy policy will **strengthen** long-term economic power versus **84%** of non-EU experts.

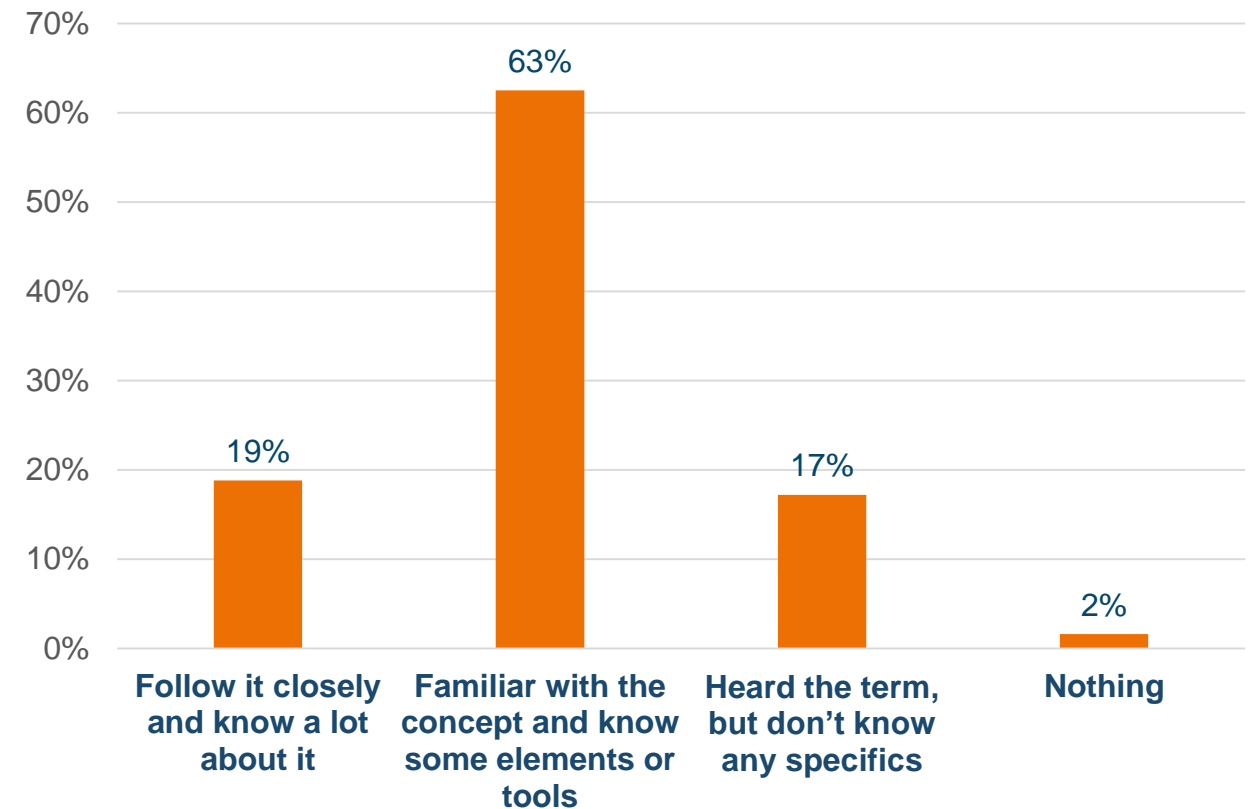


About **60%** say there is **no willingness to pay** higher energy costs for climate protection.

# Germany's Energiewende is Widely Recognized...

- **Over 80%** of all respondents either **closely follow** or are **familiar with** Germany's energy transition.
- Amongst respondents **from the EU**, **78%** said they are familiar with the concept, while the rest said they follow it closely.

Question 1: How much do you know about Energy Transition, or the German "Energiewende," and its instruments?  
(All Countries)





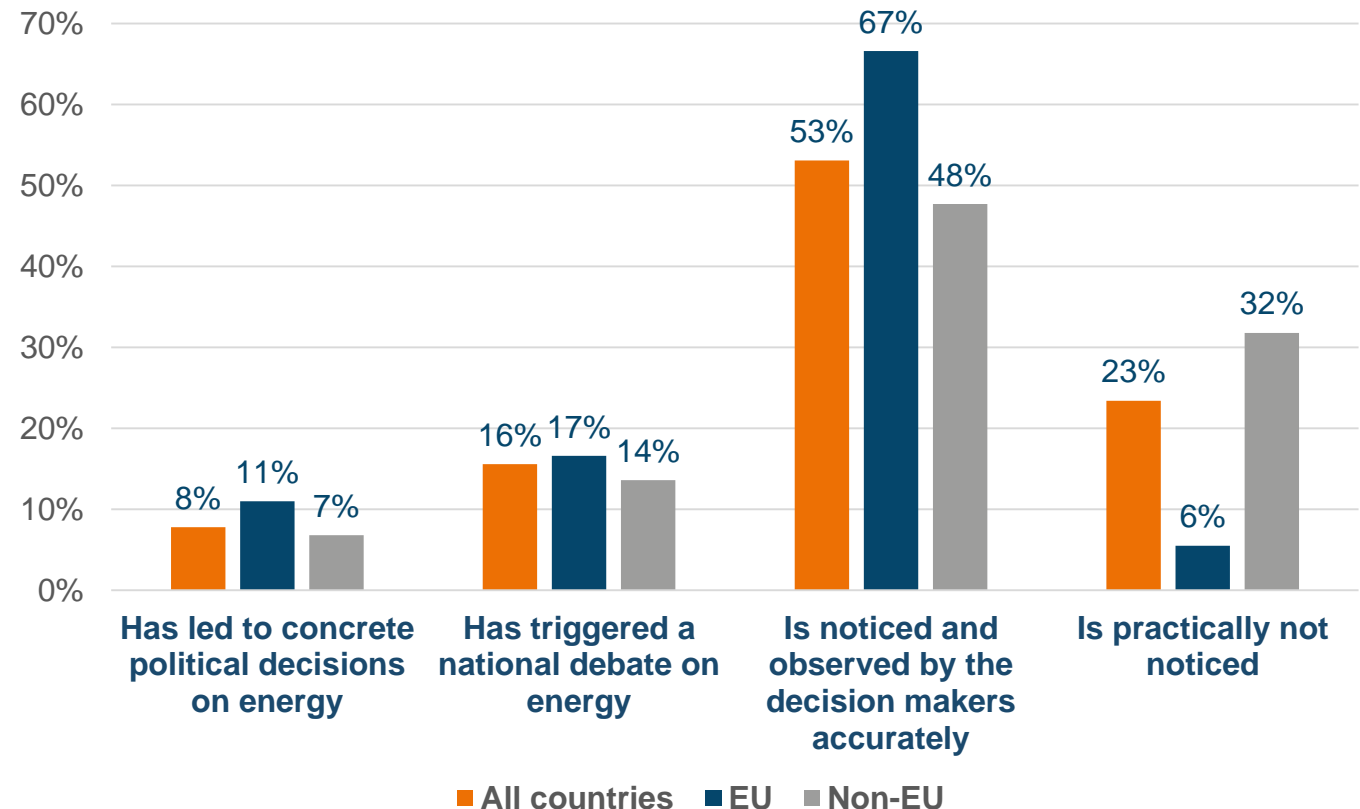
# ...and Observed by Decision Makers in Other Countries

- **More than half** say decision makers observe Germany's actions accurately.
- **Nearly a quarter** of respondents said Germany's actions have **served as a catalyst** for a national debate on energy or **led to concrete political decisions** in their countries.



*„Many of our initiatives in [renewable energy], especially pertaining to solar energy...are inspired by the German experience.”*

Question 2: How is the current German energy policy perceived in your country?



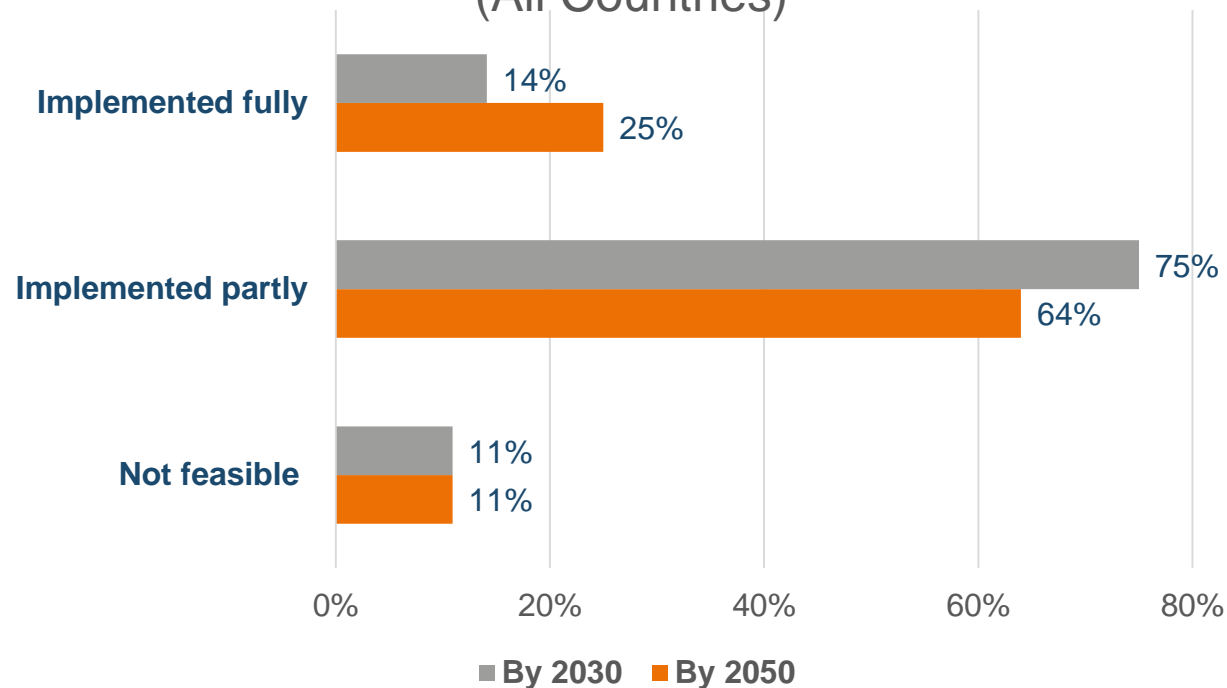
# Serious Scepticism Remains Over Germany's Ability to Fully Meet Its Climate Goals

- **86%** say Germany **will not meet** its 2030 climate goals.
- **25%** believe Germany **can fully meet** its goals by 2050.



*“The 2020 target is undershot which requires ‘catch-up’. Ten years may be too short a time to do this. In 30 years, Germany will be on track to meet the 2050 goals.”*

Question 3: How do you assess the feasibility of the German goals?  
(All Countries)



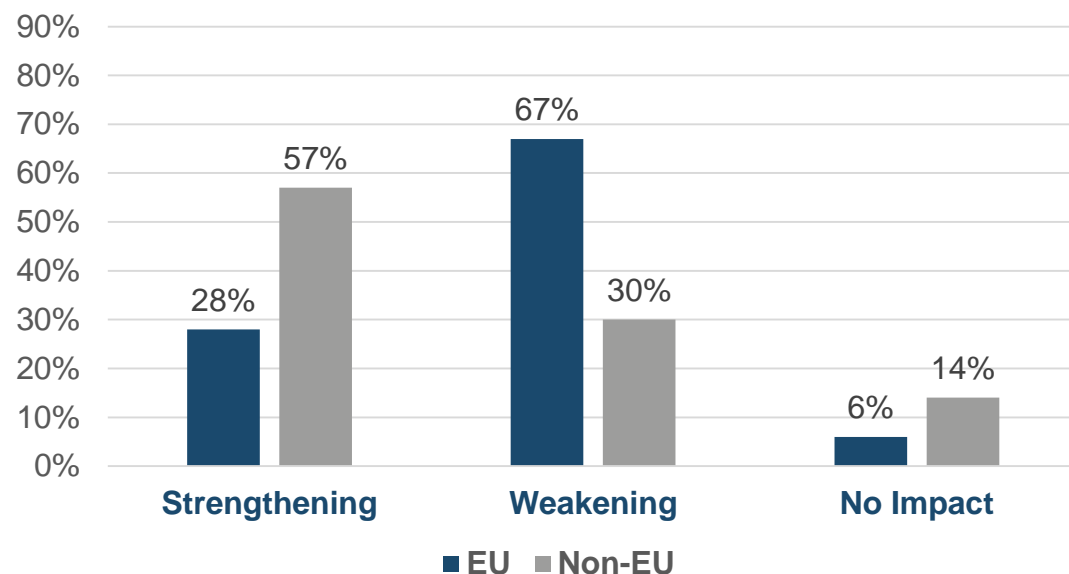


# EU Respondents Less Confident Over Positive Impact to Germany's Economic Power

- 67% of EU respondents say **Germany's economic power could weaken** in the short-/medium-term, versus 30% of non-EU experts.

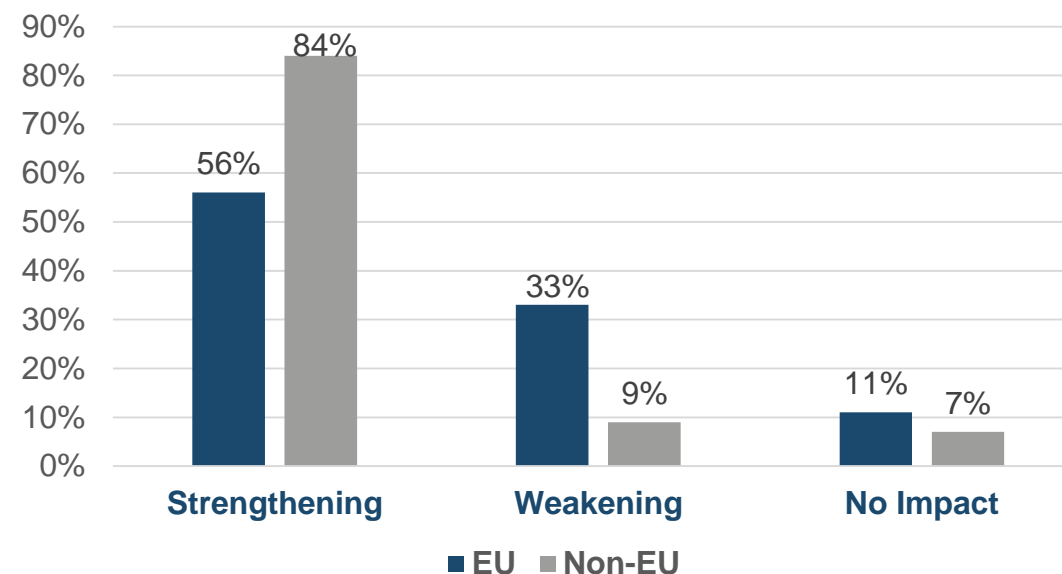
Question 4: What impact do you expect for the economic power of Germany due to the current energy policy?

**Short-/Medium-term (until 2030)**



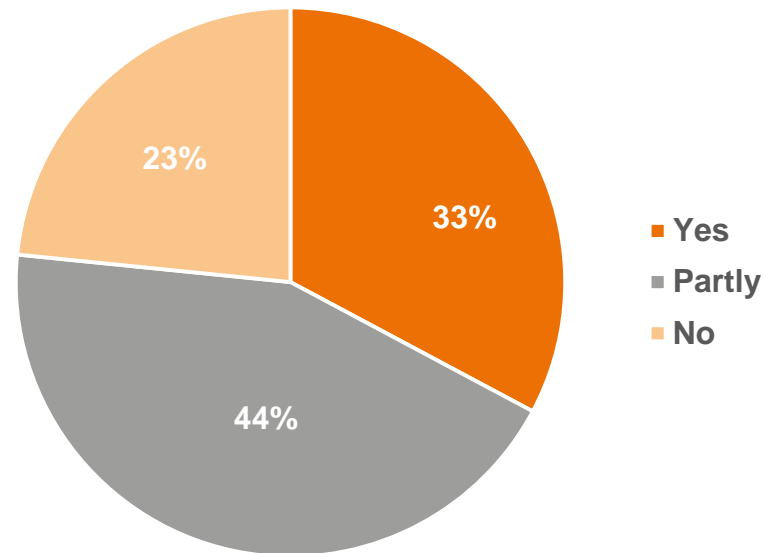
Question 4: What impact do you expect for the economic power of Germany due to the current energy policy?

**Long-term (until 2050)**

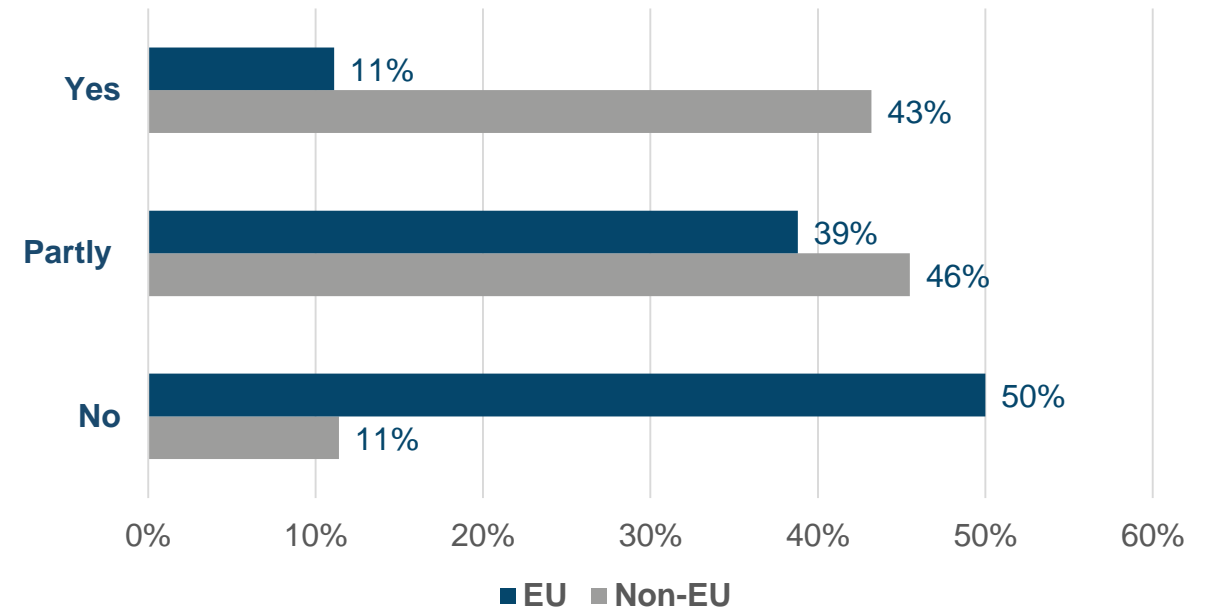


# Third of All Respondents See Energiewende as Blueprint, Europeans More Critical

Question 5: Could the current German energy policy serve as a blueprint for the world? (All Countries)



Question 5: Could the current German energy policy serve as a blueprint for the world? (EU vs. Non-EU)



- **50% of EU respondents say Germany's Energiewende does not serve as a global Blueprint.**

# Why do Respondents Not See This as a ,Blueprint‘?



**Cost:** “Most economies could not afford [Germany’s approach].”



**Other societal needs:** “For a developing country like India, priorities like socio-economic development of its vast poor populace and providing affordable energy to them, would have to be balanced.”



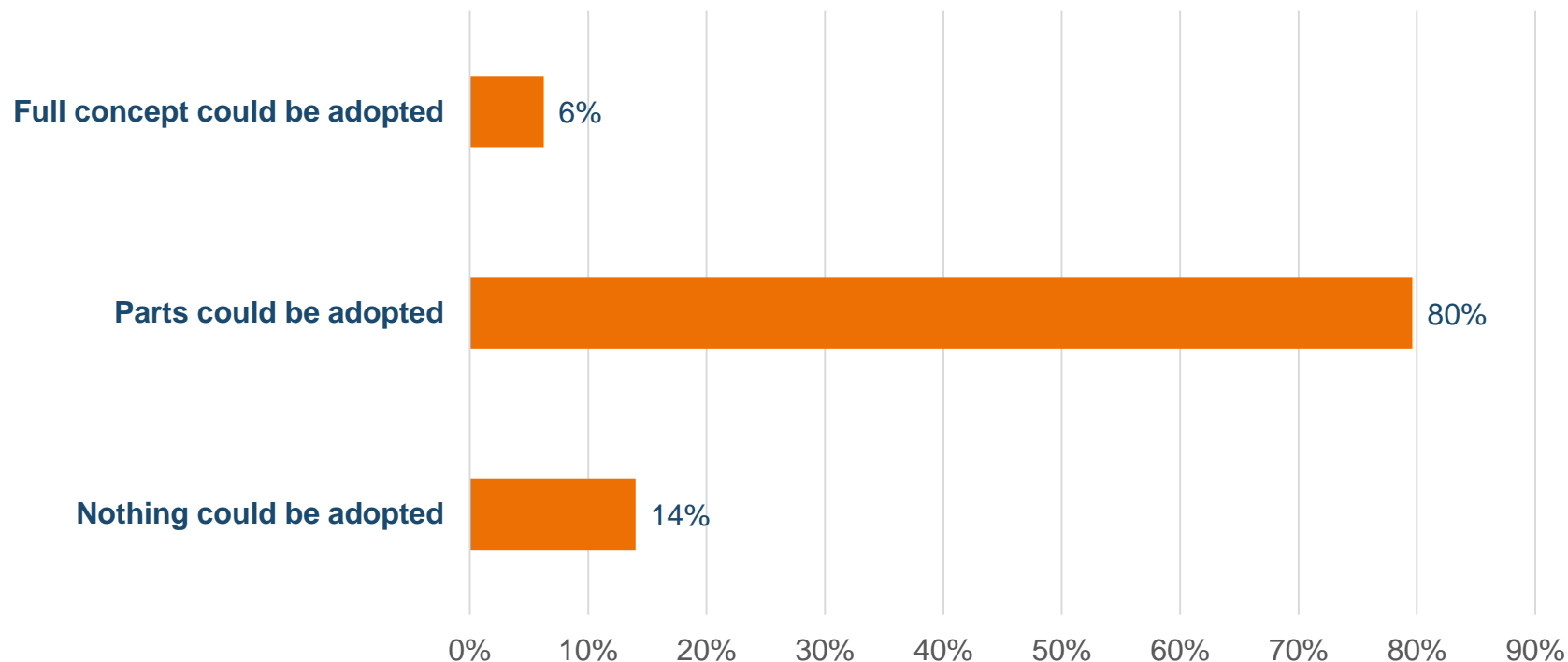
**Country-specific paths:** “Every country/market requires a unique approach in order to support the decarbonization of the energy system. What works in Germany might not work somewhere else.”



**Implementation challenges:** “There are some good elements, but multiple incentives - taxes, subsidies, CO2-pricing, etc. – have created a mess. It seems that pricing is considered important, but it is not trusted in the end. Therefore there are a lot of overlapping measures.”

# Most Believe Parts of Germany's Energy Policy Could be Adopted in Their Country

Question 6. Do you expect that your country adopts parts of the German energy policy approach?  
(All Countries)



# Regulative Law & Subsidies Top the List of German Policy Elements that Could Be Adopted Elsewhere

Regulative law (e.g. policies to enhance energy efficiency, quotas to introduce green gases, bans on certain technologies)	18.6%
Subsidies (e.g. for electric vehicles)	14.3%
60% share of renewable energy in gross final energy consumption in 2050	10.1%
Ending the use of coal-fired power plants (by 2038)	10.1%
Pricing (e.g. RES-levy)	8.9%
25% or more reduction of electricity consumption by 2050 (vs. 2008)	8.4%
80% share of renewable energy in gross electricity consumption by 2050	8.4%
40% or more reduction of final energy consumption in the transport sector by 2050 (vs. 2005)	7.4%
80-95% reduction of greenhouse gas emissions by 2050 (vs. 1990)	6.4%
50% or more reduction of primary energy consumption by 2050 (vs. 2008)	4.7%
Ending the use of nuclear power plants (by 2022)	2.2%

\*Percentages based on a total of 404 answers, multiple answers possible per person.

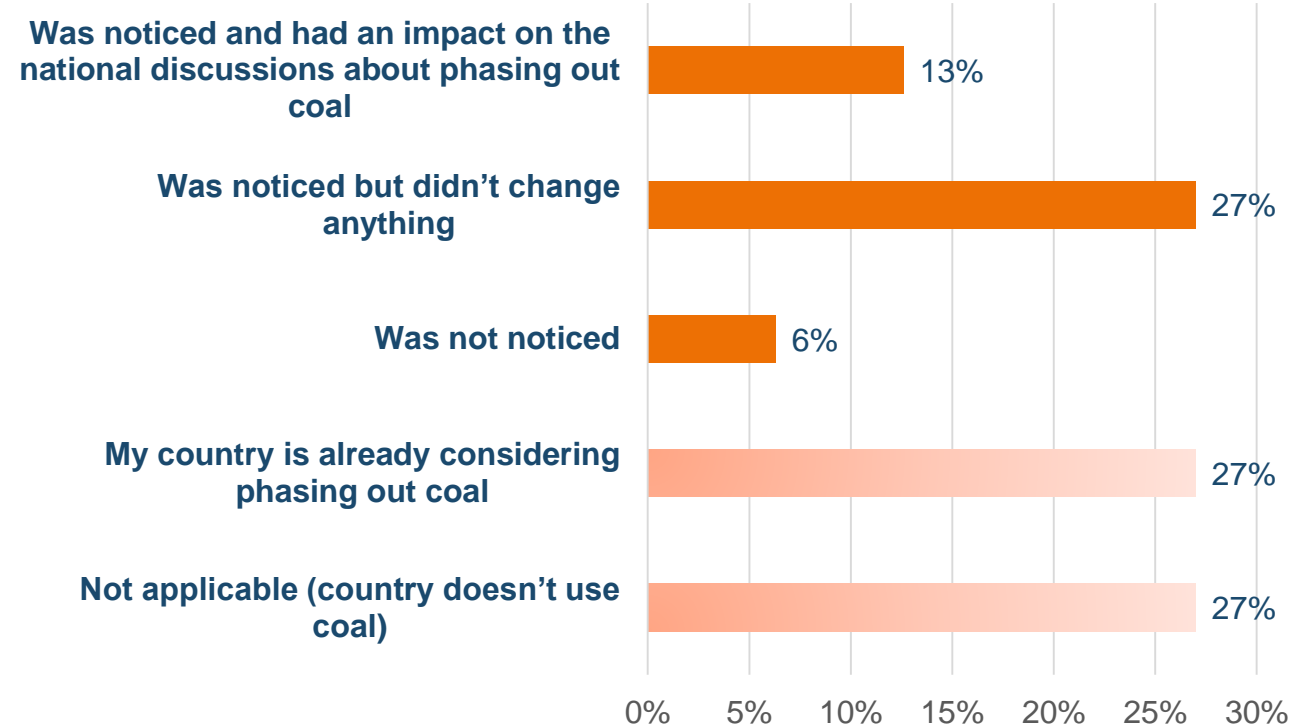
# For a Small Number, Germany's Coal Phase-out Impacted National Debate

- For **over half** of respondents, the question of phasing out coal is **not relevant**.
- However, for **13%**, Germany's decision to phase out coal **impacted national debate** in their countries.



*“Since more than 80% of South Africa's electricity is coal generated...reducing coal generated electricity means reducing coal mining jobs. Without a clear way forward to transition coal miners into new jobs, the social aspects of the energy transition will hold it (the transition) back in South Africa.”*

Question 7: Did the German decision to phase out coal impact the attitude towards coal in your country? (All Countries)





# Industry and Regional Compensation for Energy Transition Needs to be Considered

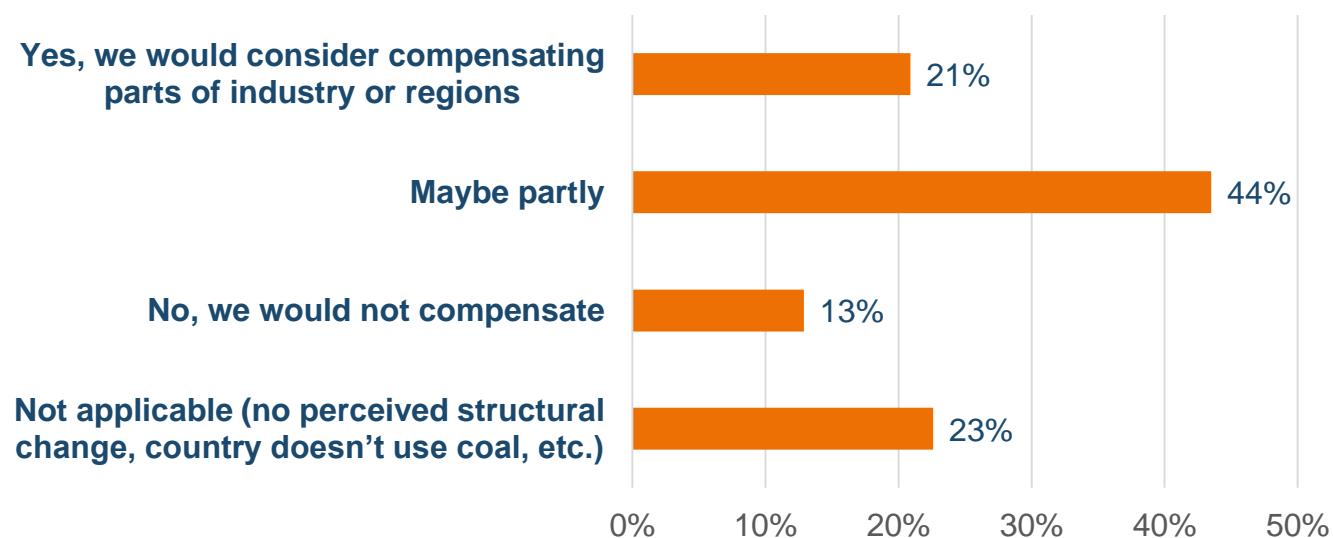
- **Over 60%** say **compensation** to industries or regions impacted by an energy transition **needs to be considered** in their home countries.



*“Without compensation and support for structural change, coal phase-out will be very difficult to implement.”*

*“This is one way of creating the ‘Just Transition’. However, how is this funded?”*

Question 8: Germany considers compensating some parts of its industry and regions for the potential structural change caused by the energy transition (e.g. reducing the use of coal). Would this be applicable to your country? (All Countries)



# There is Uncertainty Over Energy Policy Impact on Trade With Germany...

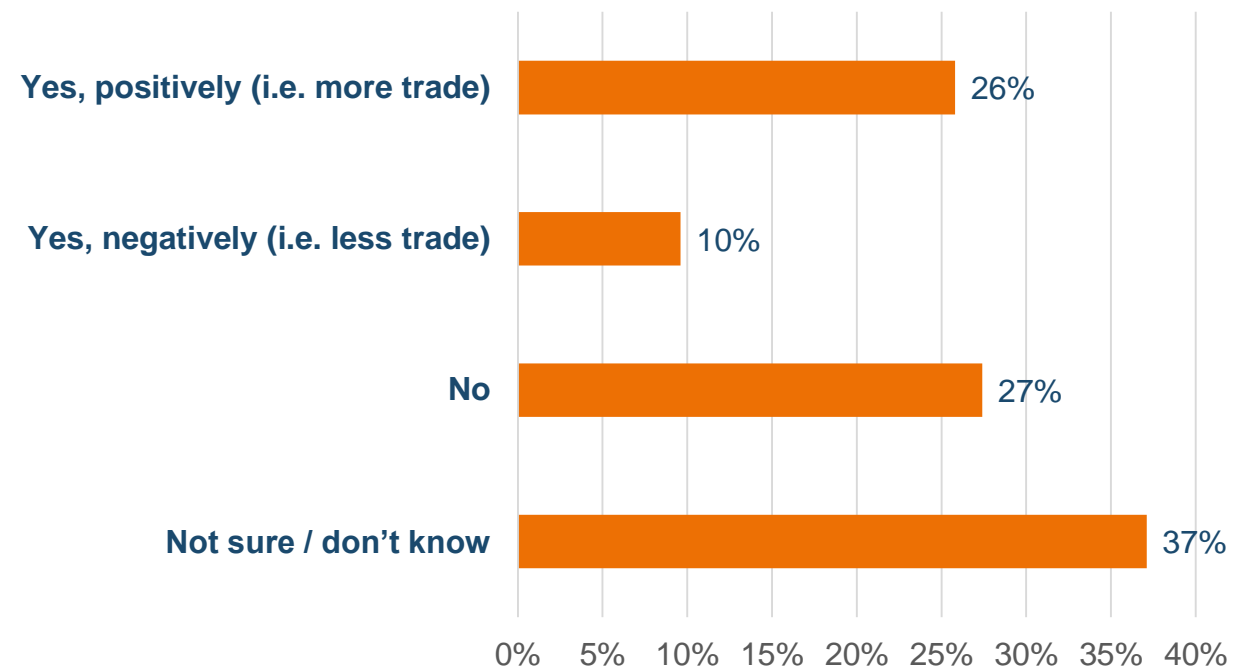
- A quarter of respondents believe Germany's energy policies will have a **positive impact on trade relations**, while a similar number see no impact.
- Only 10% believe there is a negative impact.



*"We are looking forward to enhancing trade with Germany by the implementation of a 'Power-To-X' economy (Export of Green Molecules)."*

*"It may well be negative...if Germany decides it will only trade with clean energy countries."*

Question 9: Does Germany's energy transition have an impact on your country's **trade relationship** with Germany in any way?  
(All Countries)



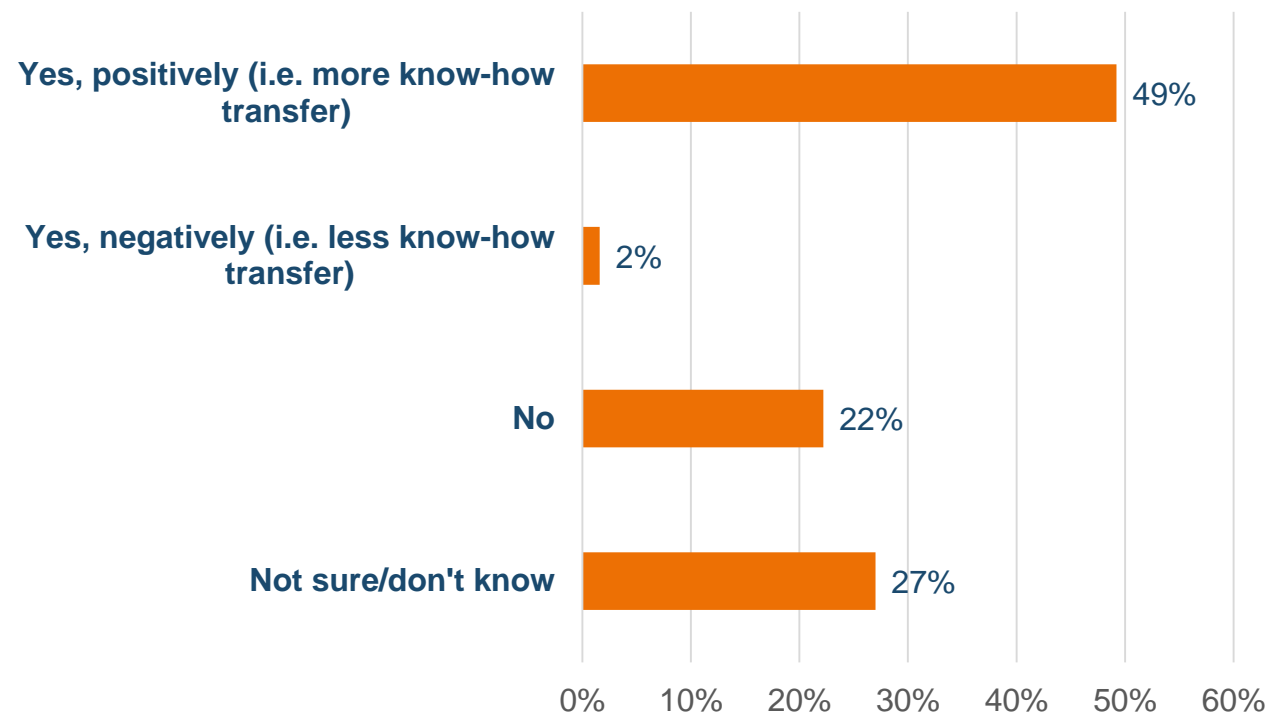
# ...But Clear Optimism Regarding the Impact on Know-how Transfer With Germany

- **49%** believe **know-how transfer will improve** as a result of Germany's Energiewende.



*“There has been lot of cooperation [on] programs and projects between Iceland and Germany in the area of geothermal.”*

Question 10: Does Germany's energy transition have an impact on your country's **know-how transfer** with Germany in any way? (All Countries)



# Respondents Point to Gaps in German Energy Transition

Question 11: Are there any policies, technologies or innovations from your country you believe are important yet absent from Germany's continued energy transition?

Innovation	Nuclear Power	Use of Hydrogen	Use of Coal	Others...
<ul style="list-style-type: none"><li>• Technology:<ul style="list-style-type: none"><li>⑩ Wave Energy</li><li>⑩ Biomass</li><li>⑩ Digitization</li></ul></li><li>• Policy:<ul style="list-style-type: none"><li>⑩ Tech Neutrality</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Small nuclear reactors</li><li>• Use of nuclear as a way to decarbonize power and electrify end-uses</li></ul>	<ul style="list-style-type: none"><li>• Role of green molecules and supporting infrastructure</li><li>• Electrolysis to gain H2 power</li></ul>	<ul style="list-style-type: none"><li>• Carbon capture, storage and utilization</li><li>• Earlier coal phase-out</li><li>• More research on clean coal technology</li></ul>	<ul style="list-style-type: none"><li>• Grid expansion and efficiency</li><li>• Avoid German-specific policies; Keep European perspective</li></ul>

# Over Half Say Their Countries are Technically and Economically Able to Follow Germany's Path

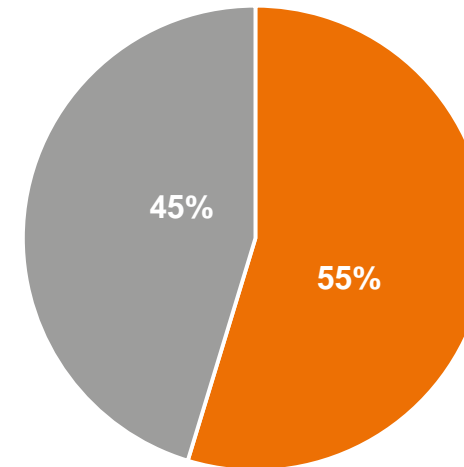
- Those who answered negatively pointed to **financial** and **economic barriers**, and a lack of political will.



*“Political economy (identification of political gains from reforms) is a key barrier to starting energy transition.”*

*“China is still largely a developing country. ...Rural areas can't cope with, and pay for, higher electricity or heating prices. ...Further challenge: Energy demand is still rising.”*

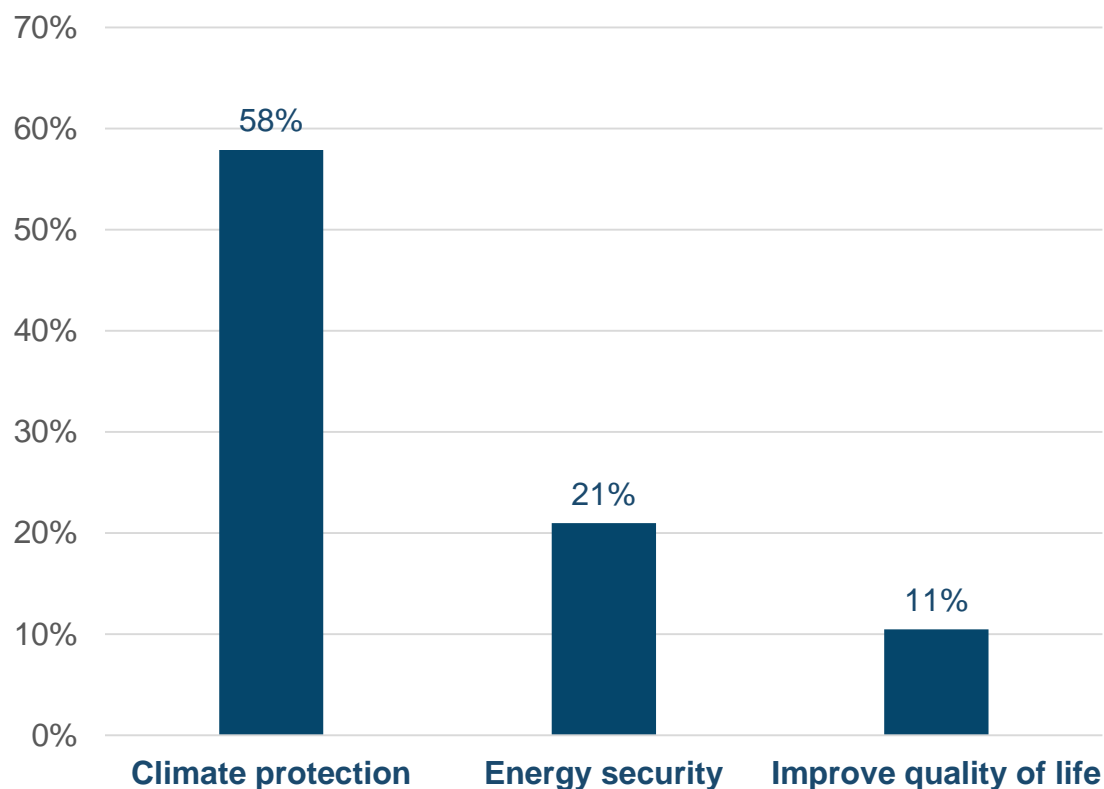
Question 12: In your country, are the technical and economic conditions available to follow the German energy policy path? (All Countries)



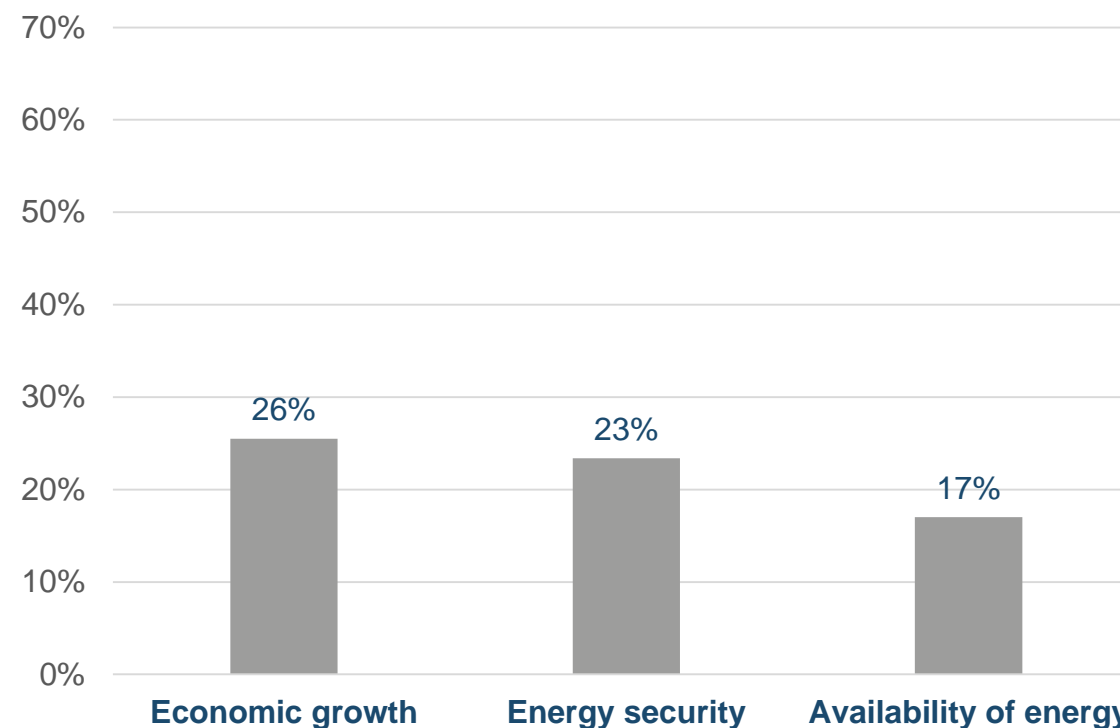
- Yes - technical and economic conditions exist
- No - technical and economic conditions do not exist

# Climate Protection Drives EU Transition; For the Rest of the World its Economic Growth & Energy Security

Question 13: In your country, what is the main driver for an energy transition? **(EU)**



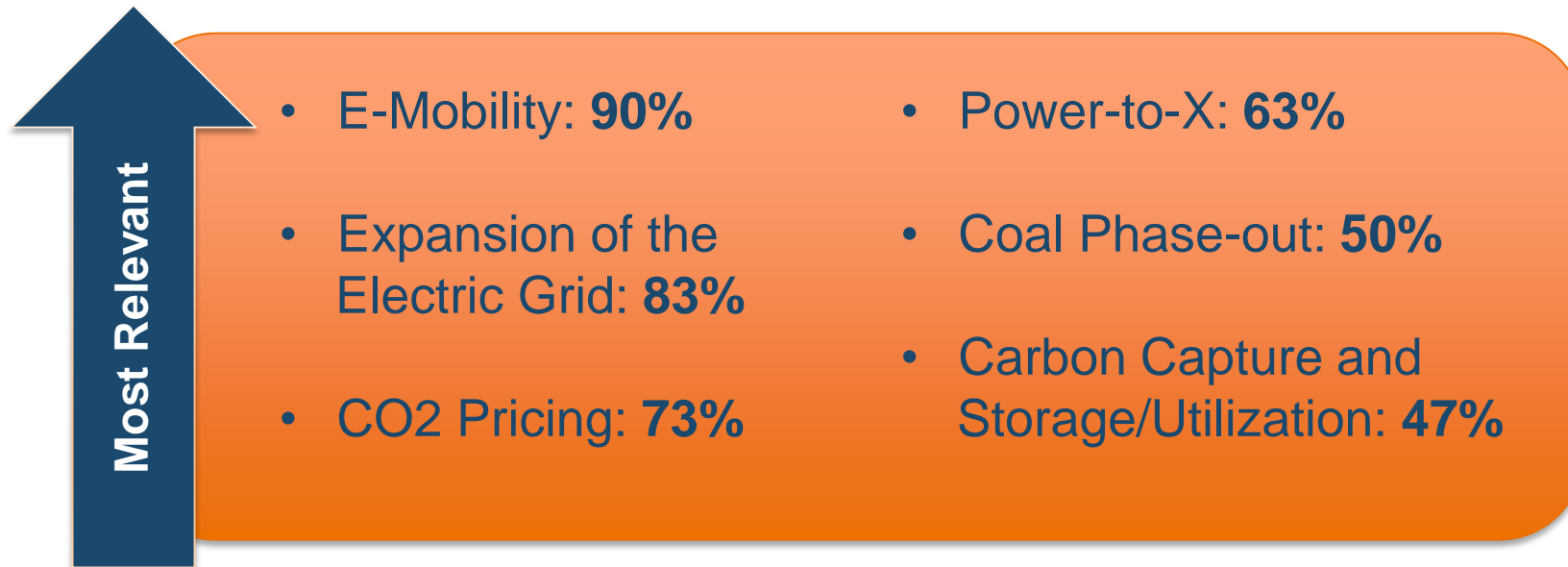
Question 13: In your country, what is the main driver for an energy transition? **(Non-EU)**





# E-Mobility, Grid Expansion and CO2 Pricing are Considered Most Relevant to Energy Sector Transition

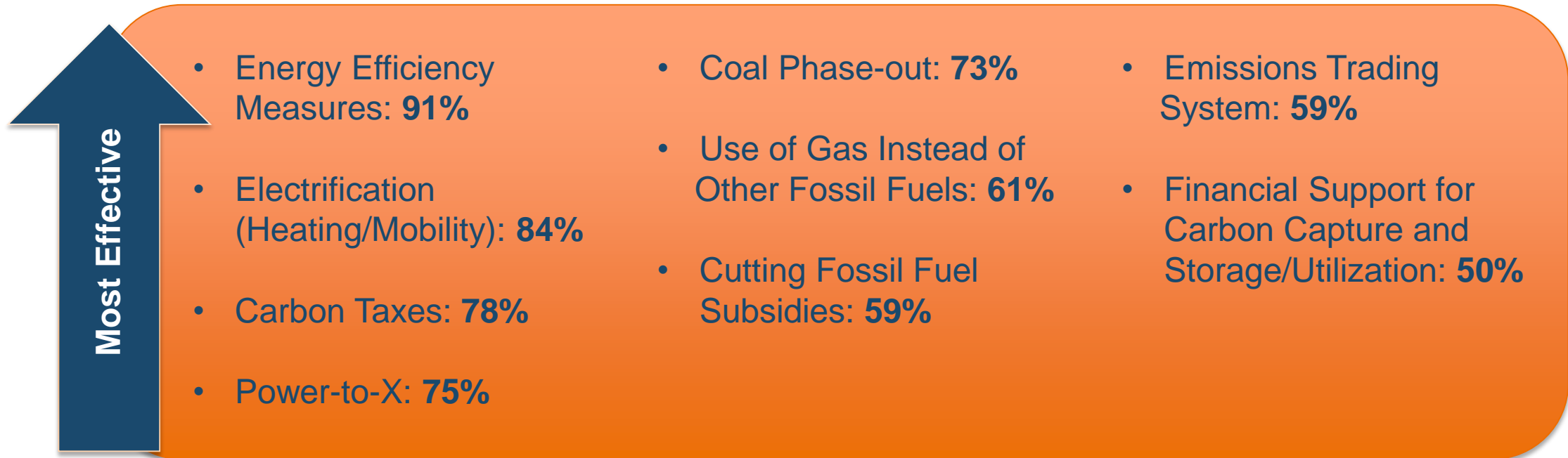
**Question 14: Currently a lot of different topics are being discussed in Germany concerning the future of the energy sector. Please indicate which of these topics are relevant for your country\* (All Countries):**



\*Multiple answers allowed, total equals more than 100%.

# Energy Efficiency, Electrification (Heating/Mobility) and Carbon Pricing Seen as Most Effective in Combating Climate Change

Question 15: How effective do you consider the following measures to tackle climate change? (All Countries)

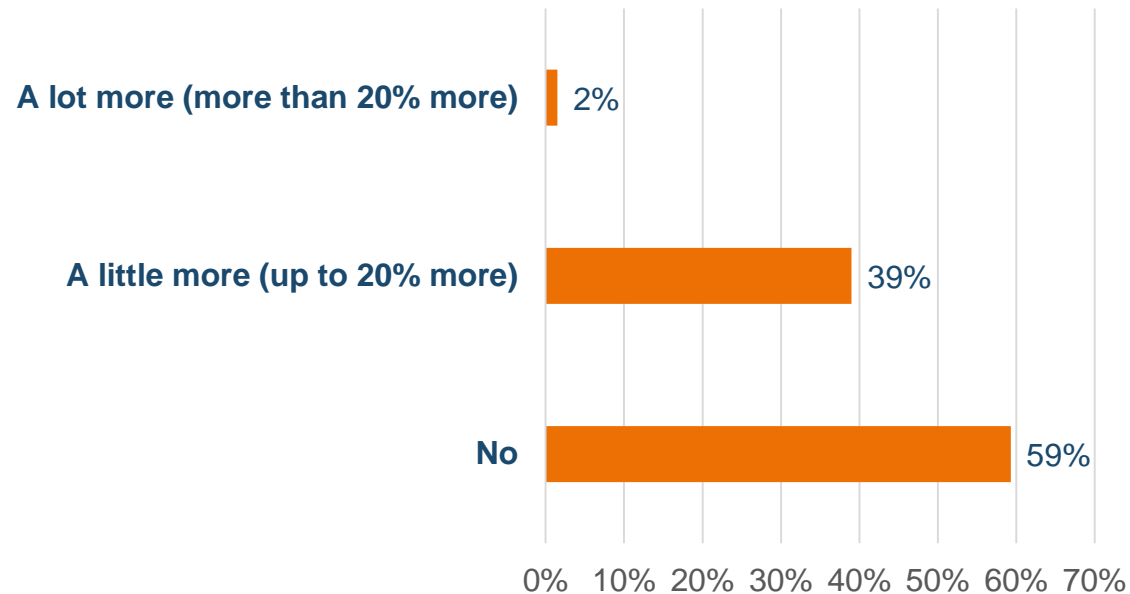


\*Multiple answers allowed, total equals more than 100%. Other responses included: Subsidies for Renewables (48%), Phase-out of all Fossil Fuels (44%), Quotas (28%) and Subsidies for Nuclear Power Plants (22%).

# A Majority Say No Higher Energy Price Acceptable for Climate Protection...

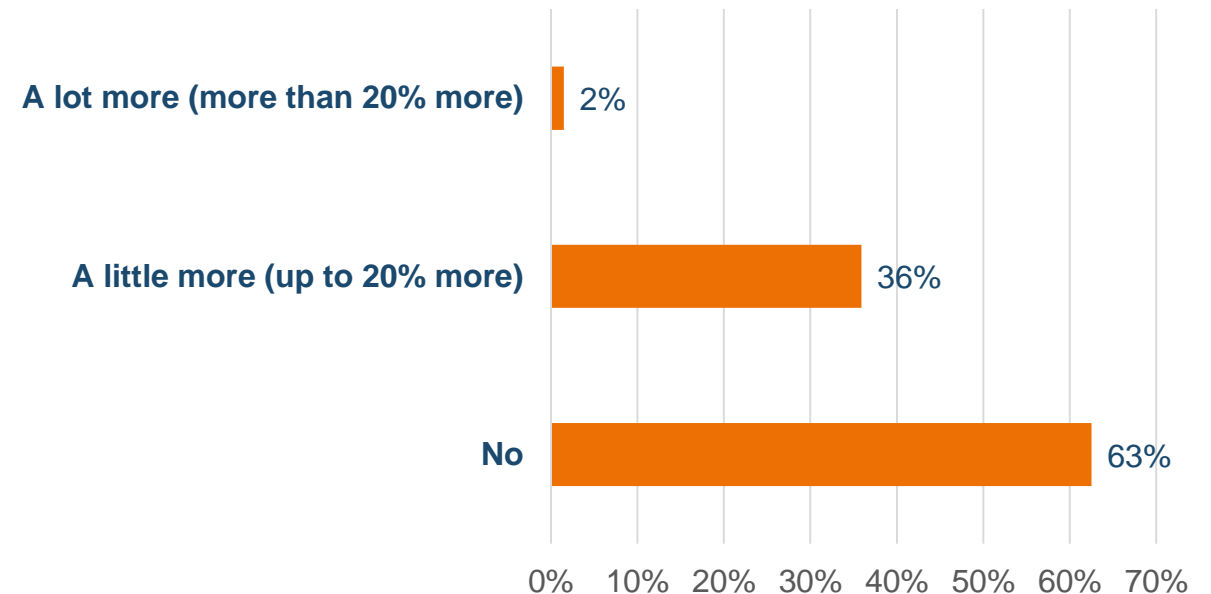
## By Industry

Question 16: In your country, is there a willingness **by industry** to pay a higher energy price for climate protection measures?  
(All Countries)



## By Population

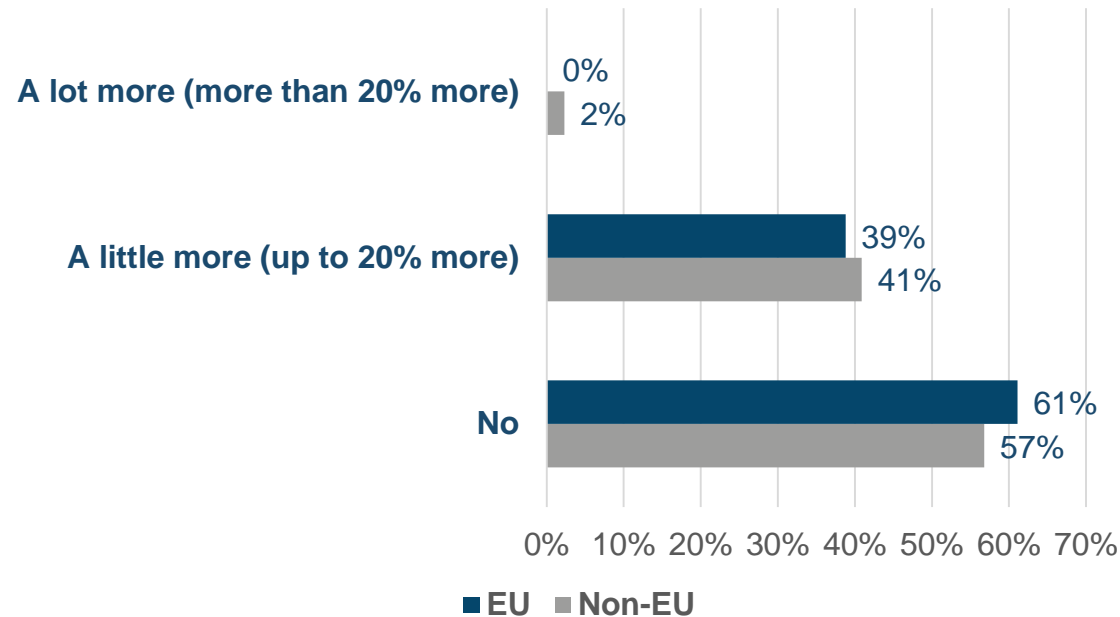
Question 16: In your country, is there a willingness **by the population** to pay a higher energy price for climate protection measures?  
(All Countries)



# ... But EU Population May Be Willing

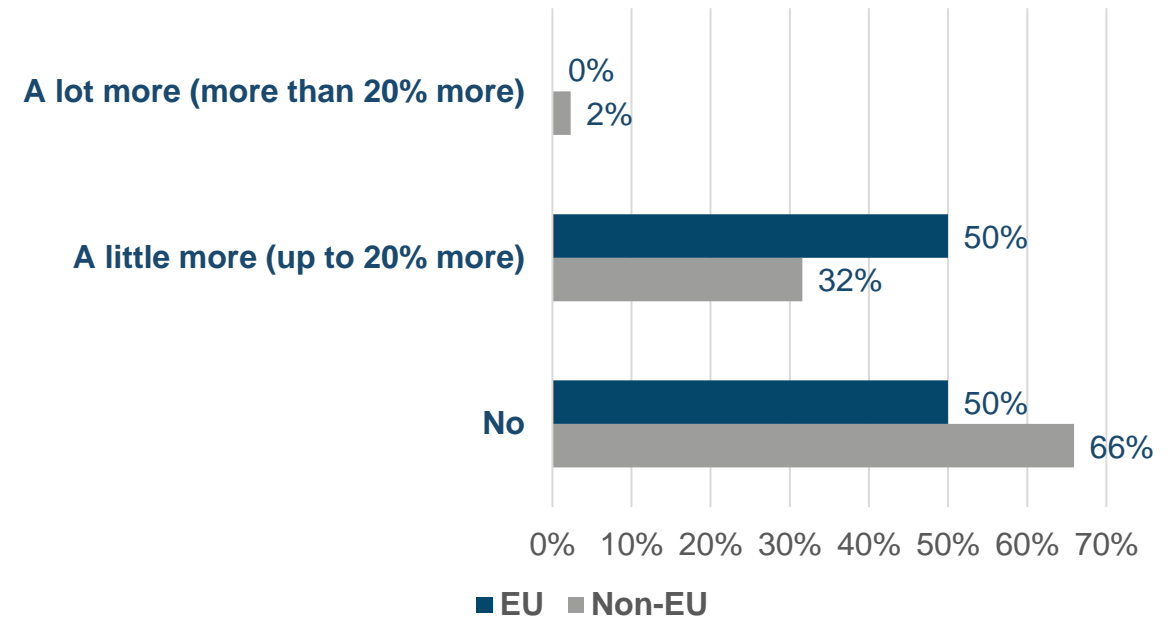
## By Industry

Question 16: In your country, is there a willingness **by industry** to pay a higher energy price for climate protection measures?



## By Population

Question 16: In your country, is there a willingness by the population to pay a higher energy price for climate protection measures?



# International ETS is Seen as Most Effective for Accelerating the Energy Transition

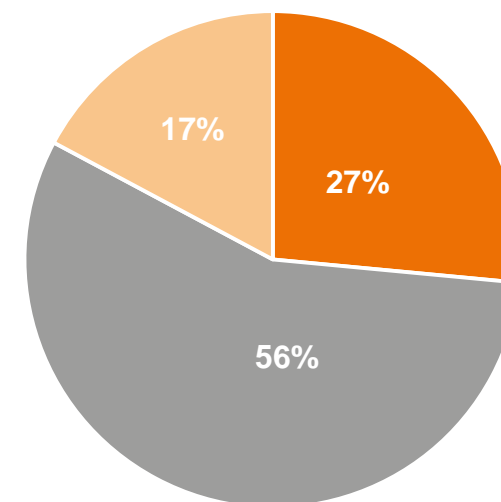
- Over 80% believe carbon pricing can accelerate the global energy transition. **56%** say an **international emissions trading system is the most effective** measure.



*“My preference is good trading system, but perhaps not including all sectors at the same level. Corrections for certain sectors e.g., via grandfathered allowances, may be justified.”*

*“Alternative taxation methods, which may include a CO2 component, are deemed as a more effective policy tool which can meet more than one objective.”*

Question 17: What do you believe is a more effective measure of carbon pricing to accelerate the global energy transition?  
(All Countries)

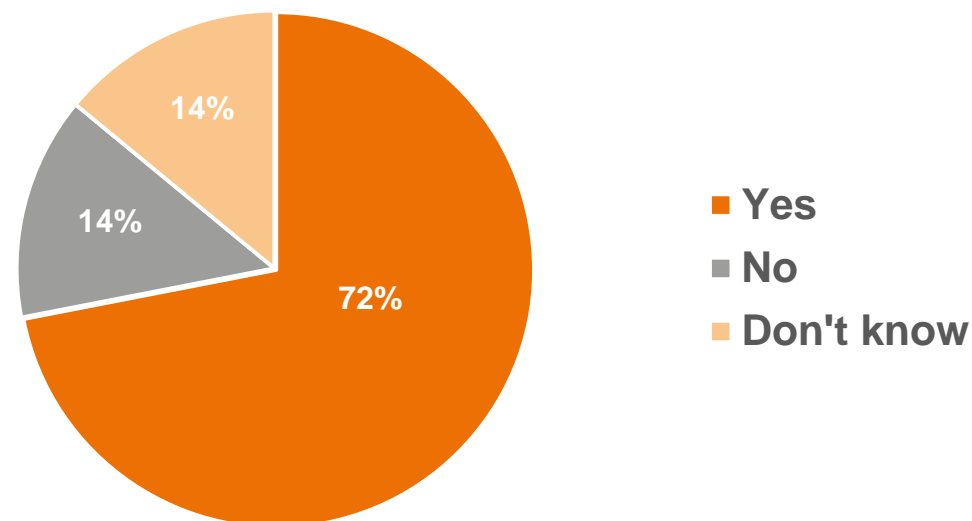


- A national CO2-tax
- An international CO2 ETS
- None of the above - pricing is ineffective

# Paris Climate Agreement has Increased Ambition for Climate Protection

- Nearly **three-quarters** believe the Paris Climate Agreement has led to **more ambitious** climate protection targets.

Question 18: Has the UNFCCC 2015 Paris Agreement (COP 21) led to more ambitious targets for climate protection in your country? (All Countries)





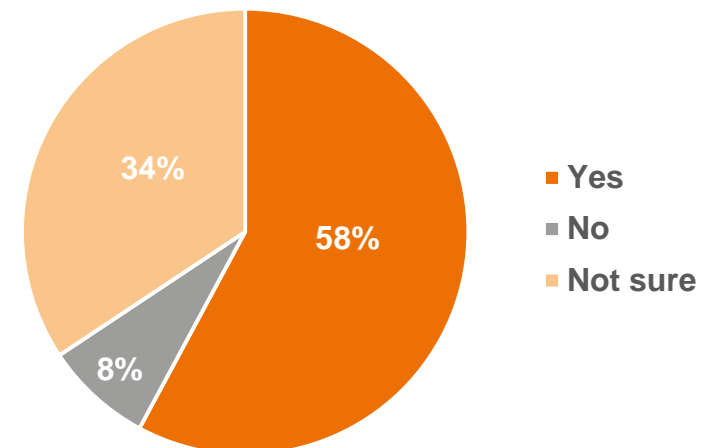
# Support for Creation of International Carbon Markets to Help Meet Domestic Emissions Reductions Targets

## Article 6 Primer:

- Focus on how countries can use international carbon markets to meet domestic emissions reduction targets
- Important because it could form the basis of a market mechanism, like an emissions trading system
- Could allow, for example, low-emitting countries to sell carbon allowances to higher-emitting countries
- One concern is ensuring mechanisms cannot be manipulated to allow more than one country to take credit for the same emissions reductions

- **Over half** say they would **support the development of Market Mechanisms**, but 34% remain unsure.

Question 19: During COP 25, Market Mechanisms (Art. 6 of the Paris Agreement) will be discussed in detail. Are you generally supporting the Art. 6 mechanisms? (All countries)



# Represented Countries in the Survey

Argentina	India	Peru
Australia	Indonesia	Poland
Austria	Ireland	Portugal
Belgium	Israel	Romania
Bosnia and Herzegovina	Italy	Russia
Brasil	Japan	Senegal
Canada	Kenya	Serbia
Chile	Latvia	South Africa
China	Lebanon	South Korea
Colombia	Libya	Spain
Congo	Lithuania	Sweden
Cote D'Ivoire	Malta	Switzerland
Croatia	Mexico	Tunisia
Dominican Republic	Monaco	Turkey
Ecuador	Morocco	Ukraine
Egypt	Namibia	United Arab Emirates
Estonia	Netherlands	United Kingdom
Finland	New Zealand	United States of America
France	Nigeria	Uruguay
Hungary	Pakistan	Zimbabwe
Iceland	Panama	

# Thank You

This briefing was prepared by Raquel Pichardo, Sustainability Fellow with the Robert Bosch Foundation Fellowship Program

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