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# Challenges of the Fit for 55 package

EU expert feedback on the targets  
of the energy transition

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# Key figures

**21.75%**

of the EU's final energy consumption in 2021 came from renewable energy sources

**0.75 percentage points**

was the average annual increase in the share of RES from 2005 to 2021

**2.4 percentage points**

must be an average annual increase in the share of RES between 2022 and 2030 in order for the EU to reach its target of a 42.5% RES share

**8%**

decrease in EU final energy consumption between 2005 and 2022

**47%**

of experts declared that the EU would achieve climate neutrality by 2050

**56%**

of experts believe that the EU will not have reached the target of a 42.5% RES share in the energy mix by 2030

**57%**

of experts were confident that their country would not use nuclear power for electricity generation in 2040

**43%**

of experts declared that fossil fuels will remain the most important source of heat in their country after 2030

**71%**

of experts believe there will be a ban on the sale of combustion engine passenger cars in the EU from 2035

**only 29%**

of experts from Central Europe were convinced that their country would meet the CO<sub>2</sub> reduction targets of the ESR

# Key findings

- **As many as 53% of experts from 23 countries surveyed by Polish Economic Institute believe that the European Union will not have achieved climate neutrality by 2050**, pointing to risks in meeting the European Green Deal primary objective. Such significant scepticism may result both from the rather distant time horizon for achieving the goal and from a lack of confidence in the effectiveness of coordination activities at the EU level.
- **The experts were much more optimistic in declaring that their own countries' national climate policy targets could be met than most EU targets.** The majority of them were of the opinion that the country they represent would meet the share of RES in the energy mix declared in the National Energy and Climate Plan in 2030, reduce primary energy consumption and limit emissions from road transport to the required levels. At the same time, as many as 56% of those experts were of the opinion that the target of a 42.5% RES share in the EU energy mix in 2030 would not be met.
- **CEE and Central European experts were much more optimistic in their assessment of the feasibility of the national RES target, yet sceptical about their country's chances of lowering energy consumption and reducing emissions from buildings and road transport.** Only 29% of the experts from Central Europe were convinced that their country would meet the ESR targets, compared to 71% of the experts from the Nordic region. **Experts from Western Europe were the most optimistic about reducing energy consumption, with 75% believing that their country would meet the target in this area.** Experts from Central and Eastern European countries were the most sceptical about reducing energy consumption, with only 42% believing that their country would meet the stated target.
- Questions on the use of nuclear energy and the transformation of the heating sector significantly divided the experts. Attitudes towards the development of nuclear energy and the possibility of electrification of the heating sector were most strongly reflected in beliefs related to the main directions of European energy development and the assessment of opportunities in the area of achieving goals at the EU level. In the study, we identified 4 main types of attitudes shared by experts. **Pro-Fossil Sceptics** are the most numerous (31%), and moderately sceptical group of respondents. They are usually not opposed to EU climate policy, but assume a slower pace of transition and a continued strong position for fossil fuels in the energy mix. **Nuclear Disruptors** support the development of nuclear energy and are the most sceptical about meeting EU targets. This group most often identifies nuclear power (43%), sometimes in conjunction with photovoltaics (29%), as a key technology for the European energy transition.

**Nuclear Transformers** are the most optimistic group (70% believe in meeting the national RES target) supporting nuclear power, but emphasising the key role of RES (92%) in the transformation of the power sector. **Green Enthusiasts** who anticipate the electrification of heating and the phasing out of nuclear power are the most optimistic group of experts.

- **The higher the climate targets of the country represented by the expert, the greater was his/her scepticism about the possibility of achieving them.** 64% of CEE experts were of the opinion that the country would meet the RES target set out in the National Energy and Climate Plan (survey conducted in November 2023). 63% of the experts from Central Europe, 50% from Western Europe and only 42% of the experts from the Nordic region, the most ambitious in this area, held this view.
- **Experts from public administration, business, think tanks and the academic sector differed significantly in their declarations regarding the European emissions trading system (ETS).** The expert's institutional affiliation had a significant impact on his/her declarations regarding the unification of the ETS, the EU's climate neutrality in 2050 or priority energy sources in the transition. At the same time, this affiliation did not exist on the question of the feasibility of meeting national targets for the share of RES in the energy mix or emission reductions in transport and construction. **Half of the experts with a business background were of the opinion that there would be a unified ETS for all types of emissions in the future, while as many as 70% of experts representing think tanks and administrations believed that a unified ETS would never be introduced.** The greatest optimism in the area of achieving national targets was present in the declarations of experts from public administration. **Representatives of the business community, although moderately optimistic in other areas, were the most sceptical in the area of meeting the target for the share of RES in their country's energy mix - 66% of them felt that the national target would not be met in time.** Business and administration are more likely than the scientific community and think tanks to believe that the national targets for reducing energy consumption will be met.

# The current legislative and legal situation of the Fit for 55 package

In the European Union, discussions on achieving climate neutrality, which is intended to transform the EU into a modern, competitive and sustainable economy by 2050, have been ongoing since at least 2018 (www1). However, experts and representatives of EU countries do not agree on the pace and pathway set for the transformation. Some suggest that the EU targets set by, inter alia, the *Fit for 55* package are too ambitious and impossible to achieve in the timeframe set (www2). Other experts, at the same time, call for an increase in the pace of the energy transition and an even tighter climate target (www3). These discrepancies prompted the Polish Economic Institute to investigate the opinions of European experts. Focused on the energy transition targets set out in the *Fit for 55* package, the questions were designed to indicate not only the beliefs of the respondents, but also the potential impact of their approaches to the energy field, the state and institutions represented, on the declarations related to the success or failure of the community in achieving its climate policy goals.

On 14<sup>th</sup> July 2021, the European Commission published *Fit for 55*, a package of 13 legislative proposals to amend and update existing legislation so that the European Union meets its target of reducing emissions by at least 55% by 2030 (compared to 1990). This target is intermediate and is an important milestone on the road to achieving EU climate neutrality by 2050.

During the process of enacting the new legislation, the originally proposed targets in the various legislative acts were discussed and then revised. For the issuance of the report, the following were adopted:

- Carbon Border Adjustment Mechanism (CBAM),
- Revision of the regulation on greenhouse gas (GHG) emissions and removals from land use, land use change and forestry (LULUCF),
- Revision of the Energy Efficiency Directive (EED),
- Review of the Effort Sharing Regulation (ESR),
- Revision of the EU emission trading system (EU ETS),
- Revision of CO<sub>2</sub> emission performance standards for cars and vans,
- Fuel EU Maritime Regulation,

- Revision of the Renewable Energy Directive (RED III),
- Social Climate Fund (SCF).

Other regulations have still not been adopted and are still in the process of being passed. These include:

- Revision of the Energy Taxation Directive (ETD),
- the Regulation on the deployment of alternative fuels infrastructure (AFIR),
- Review of the Energy Performance of Buildings Directive (EPBD),
- the ReFuelEU Aviation Regulation.

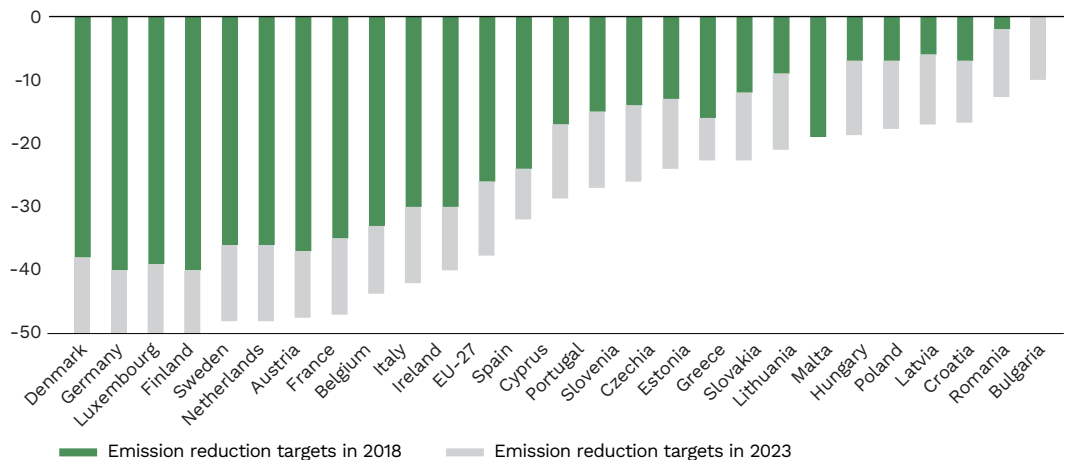


# Economic and legal environment of EU climate policy objectives

## Emission reductions in the construction and transport sectors

The Effort Sharing Regulation (ESR) sets binding national climate targets for emission reductions in the sectors of building, agriculture, waste, small industry, and transport. ESR targets vary by country, depending on GDP per capita and the cost-effectiveness of emission reductions in the country (www4). The European Commission has proposed to increase the EU emission reduction target for ESR sectors from -30% (compared to 2005) to -40%. In contrast, national climate targets range from -50% in Denmark or Germany to -10% in Bulgaria.

**Chart 1. Emission reduction targets in 2030 vs. 2005 according to the ESR (%)**



Source: prepared by PEI based on data from the European Commission.

## Europe on the road to energy efficiency

On 10<sup>th</sup> October 2023, the revision of the Energy Efficiency Directive (EED) was published. The document requires EU member states to achieve cumulative savings in final energy consumption over the entire mandatory period (2021 to 2030) of 1.3% by the end of 2025 and 1.9% between 2026 and 2030 (1.5% on average between 2025 and 2030), respectively.

According to data from the European Environment Agency, EU final energy consumption by end-users in 2022 declined by 1.5% compared to 2021 levels. (www5). The volume of energy consumption in 2022, if compared with the figures for 2005, decreased by only 8%. Given the data presented, the EU may not currently be on track to meet the 2030 energy consumption targets. This may be evidenced by the sum of national contributions reported by the Member States in their energy and climate efficiency plans. Together, these would lead to a 29.7% reduction in primary energy consumption and a 29.4% reduction in final energy consumption compared to the 2030 forecast in the 2007 EU Reference Scenario. These contributions would fall short of the EU's 2030 target of 40.5% reduction in primary energy consumption and 38% reduction in final energy consumption (EC, 2023b).

## Development of renewable energy sources in the European energy sector

In 2021, 21.75% of energy in the EU's final consumption came from renewable sources. According to the new target from the revision of the Renewable Energy Directive (RED III), in 2030 the RES share is to increase to 42.5% with an additional indicative top-up of 2.5% set to enable the target of 45% to be met. Achieving this target will require an annual increase of 2.4 percentage points each year. Between 2005 and 2021, the average annual increase was 0.75 percentage points. According to the REPowerEU plan, in order to achieve the 45% RES share in final energy consumption, it will be necessary to increase the share of RES in electricity generation to 69% by 2030 (EC, 2022a).

# Challenges of the energy transition in the heating industry

As part of the *Fit for 55* package, in 2021 the European Commission adopted a legislative proposal for the revision of the EPBD (Energy Performance of Buildings Directive). The main objective of the revision is to reduce greenhouse gas emissions in the buildings sector and improve the energy efficiency of the construction resources. According to EC data (www6), 35% of buildings in the European Union are over 50 years old and 75% of the building stock is energy inefficient. This makes the buildings sector responsible for approximately 35% of greenhouse gas emissions from heat and power generation.

As part of the ongoing negotiations on the revision of the EPBD, the European Parliament has proposed a ban on fossil fuel heating systems from 2035. According to Eurostat data, in 2021 54% of final energy consumption for heating buildings came from fossil fuels. Some EU member states have introduced their own legislation at national level restricting the use of fossil fuel boilers, e.g. Slovenia from 2023, Germany from 2026 will not allow the use of coal boilers, Austria from 2023 and the Netherlands from 2026 will ban the installation of gas boilers in new buildings (www7).

## Opportunities and risks of extending the EU ETS

The EU Emissions Trading Scheme (EU ETS) is one of the most important elements of the European Union's strategy to halt climate change by reducing greenhouse gas emissions. Since EU ETS was introduced in 2005, it has been consistently updated and modernised, e.g. by changing the allocation method or increasing the number of GHGs covered and sectors included in the scheme. In June 2023, a revision of the EU ETS was adopted introducing a separate emissions scheme for the buildings and transport sectors (ETS 2). Currently, the only sectors not covered by the EU ETS are: agriculture, waste, non-ETS industrial emissions and product use. In order to achieve complete climate neutrality by 2050, emissions in all sectors of the economy will need to be reduced. However, the sectors that have not been included in the EU ETS until now may pose a major challenge on the path to climate neutrality. In 2021, the agriculture sector was responsible for 386 million tonnes of CO<sub>2</sub>e greenhouse gas emissions. Emissions from agriculture are estimated to account for around 10% of the total (www8). According to data from the European Environment Agency, GHG emissions from agriculture in the EU showed a slight downward trend (2%) between 2005 and 2021. The inclusion of agriculture in the EU ETS could lead to a sharp increase in food prices. According to the CAKE/KOBiZE scenario, the cumulative increase in agricultural prices in 2050 compared to 2015 prices could even exceed 100% (KOBiZE, 2023).

# Fair and sustainable competition in the global market.

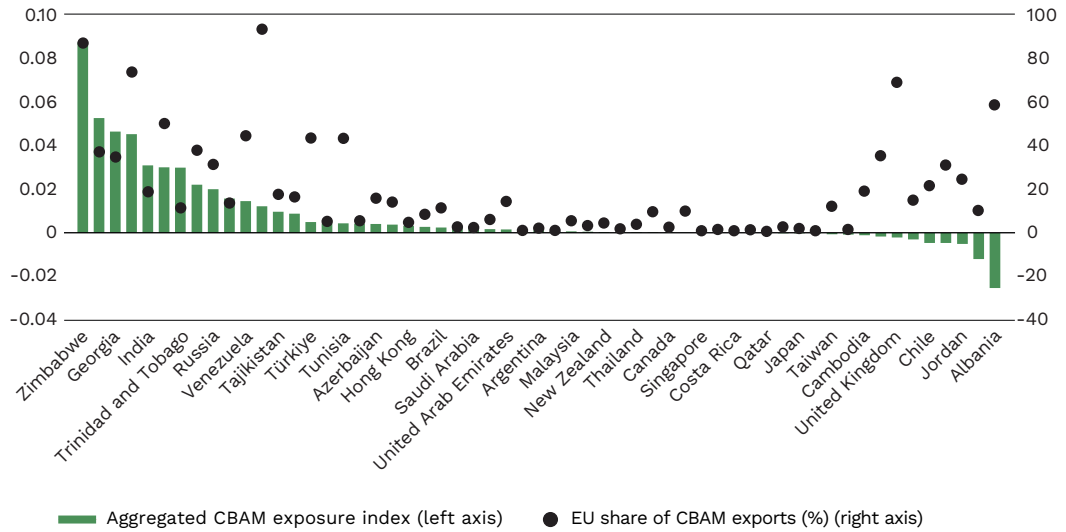
## CBAM in EU-27

CBAM (Carbon Border Adjustment Mechanism) is an EU regulatory measure, which in its current form aims to protect European industry from unfair high-carbon competition from third countries by protecting them on the internal market despite higher production costs due to the reduction of free allowances in the Emissions Trading System (ETS). The industries covered by CBAM will be required to financially compensate for CO<sub>2</sub> emissions contained in goods imported into the EU by purchasing carbon certificates at a price equal to the ETS allowance price. During the transition period, CBAM covers imports of goods from six emission-intensive industries, i.e. iron and steel, cement, aluminium, fertilisers, electricity and hydrogen (www9).

According to World Bank analysis, Zimbabwe, Ukraine and Georgia will be most affected by the introduction of the CBAM due to the relatively high share of CBAM exports to the EU and high emissions intensity (www10). The mechanism will largely affect suppliers in the iron, steel and aluminium sectors. Securing alternative supplies and increasing domestic production will be a challenge for the EU, where there is a growing demand for critical raw materials, essential for the production of equipment used in the energy transition.

The results of some scientific studies (www11) question the effectiveness of CBAM in reducing carbon leakage. Moreover, CBAM may affect GDP decline - trade retaliation leads to multiplied economic losses, which would be borne mainly by poor countries. The current shape of CBAM, which primarily covers raw materials and components of products made in Europe (e.g. cars), will also increase production costs for manufacturing companies in the EU (www12). This means that CBAM may result in 'carbon leakage' downstream and it is the non-EU manufacturing sectors that will gain a competitive advantage over EU plants. Manufacturers may relocate their plants abroad to gain access to cheaper steel, electricity or aluminium.

**Chart 2. Country exposure to CBAM**



Note: left axis – aggregated indicator of exposure to CBAM according to the World Bank, right axis – EU share in the export of products covered by CBAM (%).

Source: prepared by PEI based on [the World Bank's](#) data.

## Transformation of the road transport sector

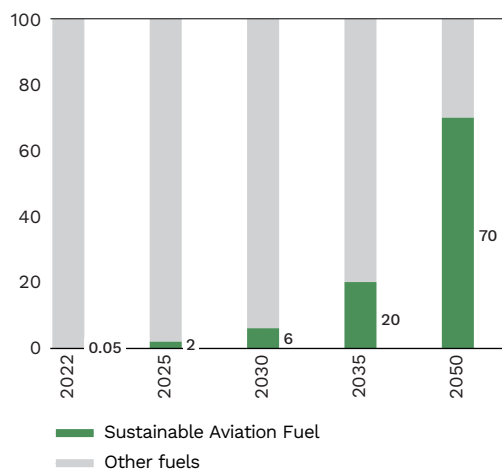
In April 2023, the European Commission published a regulation on CO<sub>2</sub> emission standards for cars and vans as part of the European Green Deal, banning the sale of new combustion cars in the EU from 2035 (EC, 2023a). More than 12% of new passenger vehicle registrations in the Union in 2022 were already electric cars (BEVs), with plug-in hybrids and others following at 32%. This share has increased from 1% for BEVs and just under 5% for hybrids in 2018. According to the International Energy Agency (IEA, 2023), global spending on electric cars exceeded USD 425 billion in 2022, which represents a 50% increase compared to 2021.

The transformation of the transport sector could pose a challenge for the European automotive industry. A PEI analysis (Kutwa, May, 2022) shows that in the Visegrad countries, which are key sub-suppliers to the EU sector, up to 30-52% of the sector will be exposed to technological change. There are two key questions: to what extent will EU production facilities be able to adapt to the change and will the European economy be competitive against the growing advantage of China or the US.

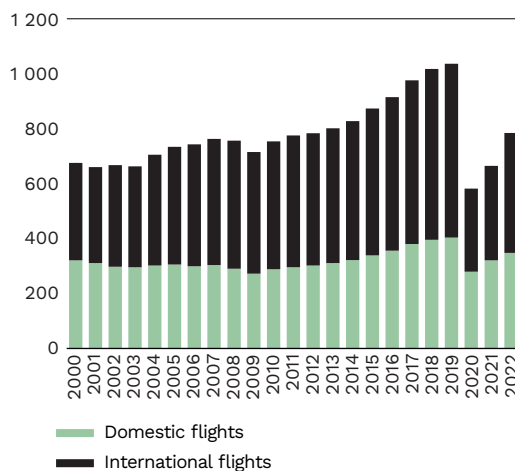
## Aviation and sustainable fuel

Sustainable aviation fuel (SAF) is a biofuel used to power aircraft that has similar properties to conventional jet fuel but a smaller carbon footprint. In September 2023, the European Parliament has approved an agreement between the Parliament and the Council to set binding targets for airlines in Europe to increase the use of sustainable aviation fuels. The approved proposal aims to increase both the demand for and the supply of SAF. Fuel suppliers must ensure that SAF will account for 2% of the fuel at the EU's airports in 2025, then rising to 6% in 2030, 20% in 2035 and gradually to 70% in 2050. Current SAF production represents less than 1% of global jet fuel demand.

**Chart 3. Sustainable Aviation Fuel (SAF) share targets for fuel available at EU airports (%)**



**Chart 4. Global emissions from the aviation sector divided into domestic and international flights (in Mt CO<sub>2</sub>)**



Source: prepared by PEI based on data from the European Commission.

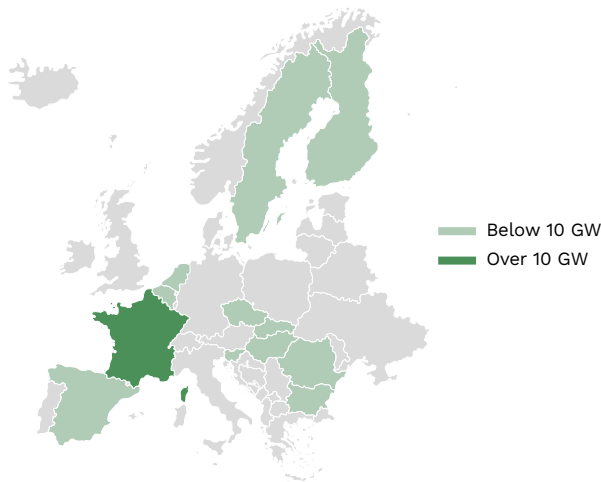
Source: prepared by PEI based on the data of Poland's Central Statistical Office.

## Nuclear energy in the EU

As of May 2023, there are a total of 100 nuclear reactors in operation in the European Union with a net installed capacity of 96 329 MWe. France has the largest number of operating nuclear units (56 reactors), followed by Spain (7) and Sweden (6) (www13). There are mixed opinions about the role of nuclear energy in the energy transition. Although nuclear power was addressed in the EU's Taxonomy Delegated Act in 2022, EU experts disagree

on whether it should qualify as an environmentally sustainable investment (EC, 2023c). Some countries are abandoning the expansion of existing power generation capacity or even extinguishing capacity successfully operating in the system. In April 2023, Germany closed down its last operating nuclear power plant (www13).

**Mapa 1. Installed capacity of existing nuclear reactors in the EU (GW of installed electricity capacity)**



Source: prepared by PEI based on data from the European Nuclear Society.

## Climate neutrality

On 11 December 2019, the European Commission unveiled the European Green Deal, a package of policy initiatives aimed at achieving EU climate neutrality by 2050. All member states have committed to making the EU the first climate-neutral continent by 2050. To achieve this goal, they have pledged to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels (www14).

# Green divisions.

## Results of the survey

In the study conducted by the Polish Economic Institute, we focused on the objectives and issues presented in the directives: EU ETS, EED, RED III, EPBD, CBAM, the ReFuelEU Aviation initiative and the ESR regulation. The specific, quantified objectives indicated in these legal acts made it possible to efficiently indicate the theses to which the surveyed experts could refer. A detailed description of the study together with the questionnaire is provided in the **methodological annex**.

The questions asked to experts on **the implementation of the objectives at EU level** concerned their opinions on:

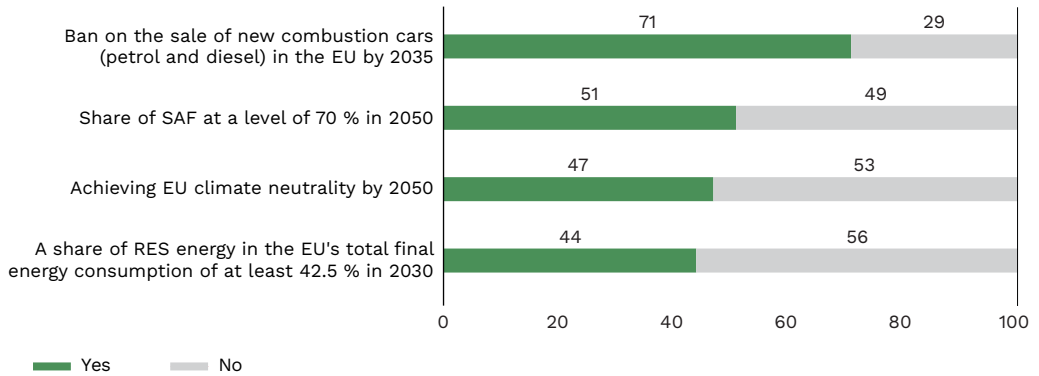
- the share of RES in the total final energy consumption in the EU in 2030,
- the entry into force of a ban on the sale of new combustion cars (with petrol and diesel engines) in the EU by 2035,
- the share of sustainable aviation fuel to reach 70% in 2050,
- the EU to achieve climate neutrality by 2050.

The questions asked to experts on the **implementation of the objectives at the national level** concerned:

- the share of RES in the total final energy consumption of the EU Member State in 2030,
- Member State's achievement of the 2030 reduction target for emissions from road transport, rail and buildings (ESR),
- the Member State's achievement of the 2025-2030 annual average energy consumption reduction target.



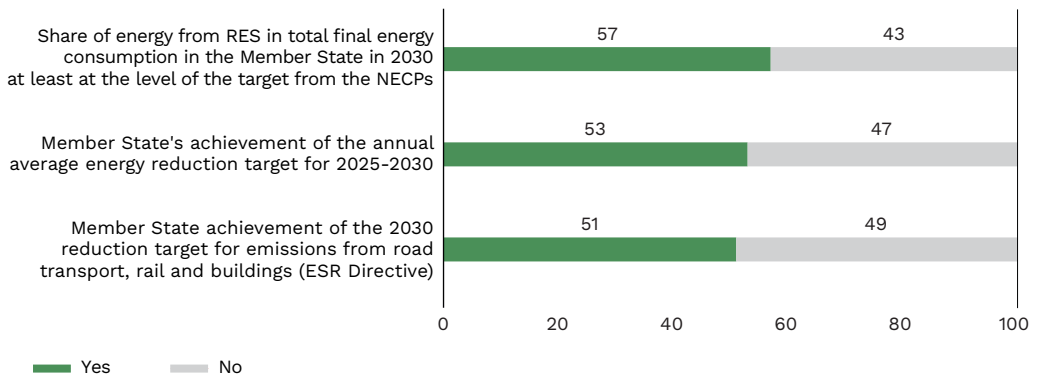
**Chart 5. Experts' views on the chances of achieving the *Fit for 55* targets at EU level (%)**



Source: prepared by PEI based on the results of the opinion survey.

**The least controversial among the experts was the feasibility of the target to ban the sale of combustion-engined passenger cars before 2035. More than 70% of the experts were of the opinion that achieving this target would be successful.** Just over half of them (51%) believed that the share of sustainable fuels in the EU's aviation fuel mix would exceed 70% by 2050, while 44% believed that the EU would achieve climate neutrality by 2050 - as many as 56% felt that the target was unlikely to be met. **A major concern raised by the experts was the achievement of the target for the share of RES in the EU's energy mix in 2030 - as many as 56% felt that the target was unlikely to be met.**

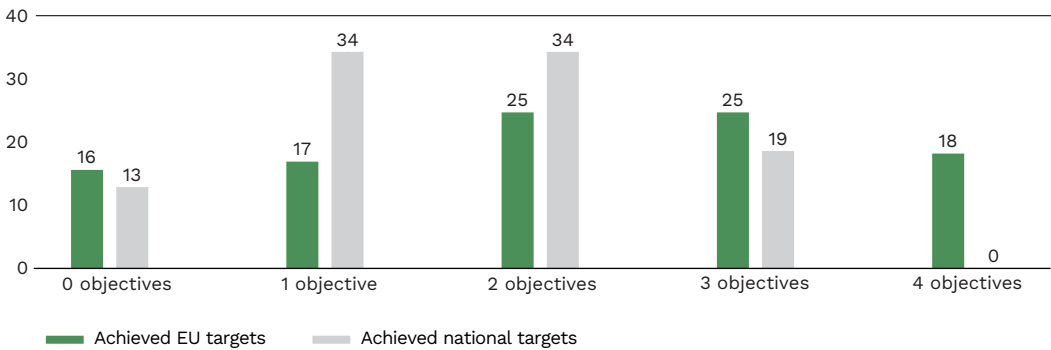
**Chart 6. Experts' views on the chances of meeting the *Fit for 55* targets at national level (Member States, %)**



Source: prepared by PEI based on the results of the opinion survey.

**Experts were less sceptical in assessing the feasibility of national targets than most EU targets.** More than half of the experts (57%) were of the opinion that the country they represent would meet the target for the share of RES in the energy mix set out in the National Energy and Climate Plan. There was slightly less optimism regarding the possibility of meeting the national targets in the area of energy consumption (53%) and reduction of emissions from road transport (51%). **Only 13% were of the opinion that their country would not meet any of the three national climate policy targets. At the same time, only 16% believed that each target would be met on time.**

**Chart 7. Number of national targets and EU targets that experts believe will be achieved on time (%)**



Source: prepared by PEI based on the results of the expert opinion survey.

**40% of the experts estimated that all or almost all climate policy targets would be met.** However, those interviewed strongly disagreed on the feasibility of achieving virtually every climate target, both the EU and national ones. Optimism about meeting one national or EU target in one area rarely translated into the others. The discrepancies in viewpoints depended primarily on the country and the institution they represented and their attitude towards the priority directions of energy development.

## **District heating and nuclear energy. Two strands of argument for European experts**

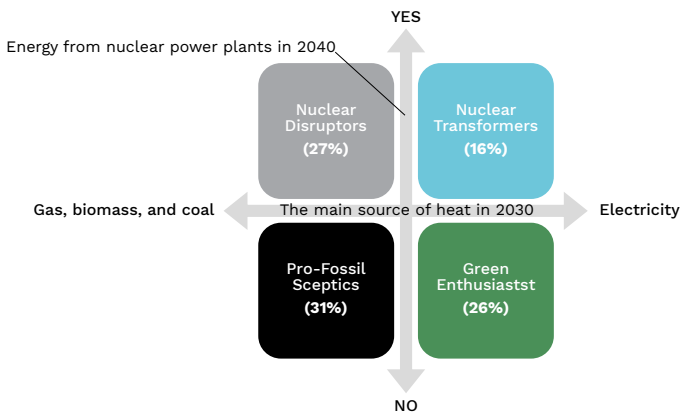
In the study, not only were we interested in the experts' opinions on the chances of achieving the climate policy goals in time, but also in understanding the diversity of positions taken by European experts. Analyses of the opinion survey results identified two strands of argument: nuclear energy and district heating. Declarations in these areas had a significant impact

on the other experts' positions. We used variables to identify the 4 main attitudes:

- **assessment of the prospects for the development of nuclear energy** in the represented country (will the country represented by the expert produce electricity in 2040?),
- **assessment of the prospects for electrification of heating** (what will be the main source of heating in the country represented by the expert in 2040?).

Both questions significantly polarised the experts. **41% of respondents pointed to electricity or another low-carbon source as the main source of heating in 2040.** However, the majority of respondents claimed that fossil fuels would remain the most important source of heating, i.e. natural gas (35%) and hard coal (8%); at the same time, relatively many experts also highlighted the role of biomass (13%). The experts also disagreed on the future of nuclear power. **Just over half (57%) of those surveyed were convinced that their country would not use nuclear power to produce electricity.** These attitudes were most strongly reflected in beliefs related to the main directions of European energy development and the assessment of opportunities in the area of achieving EU goals.

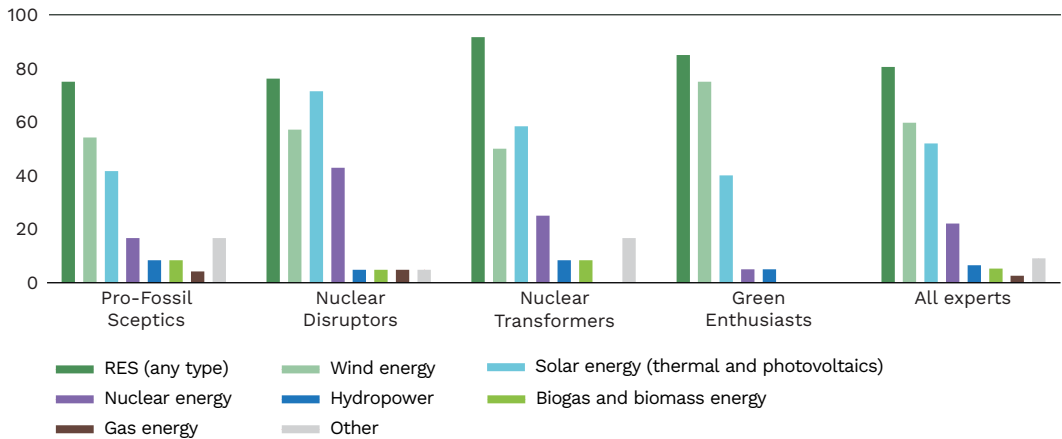
**Infographic 1. Heating and nuclear energy. Main strands of argument**



**Pro-Fossil Sceptics** are the largest, moderately sceptical group (31% of respondents). They tend not to oppose EU climate policy, but assume a slower pace of transition and that fossil fuels will retain an important position in the energy mix. **Nuclear Disruptors** support the development of nuclear power and are the most sceptical about meeting EU targets, this group tends to point to nuclear power (43%), sometimes in conjunction with photovoltaics (29%), as a key technology for the European energy transition. **Nuclear transformers** are the biggest optimists (70% believe in meeting the national RES target) supporting nuclear power, but emphasising the key role of RES (92%) in the transformation of the power sector. **Green enthusiasts**

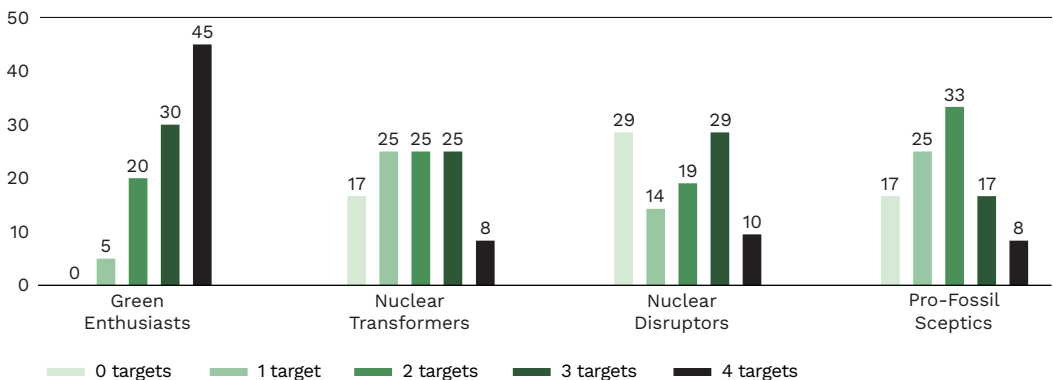
anticipate electrification of heating and the phasing out of nuclear power are the most optimistic group of experts. As many as 75% of respondents in this group believe that all or almost all climate targets will be met. They are also the biggest supporters of wind power, with 75% saying it will play a key role in the electricity transition.

**Chart 8. What types of energy will be key in the transformation of the electricity sector? (percent of response)**



Source: prepared by PEI.

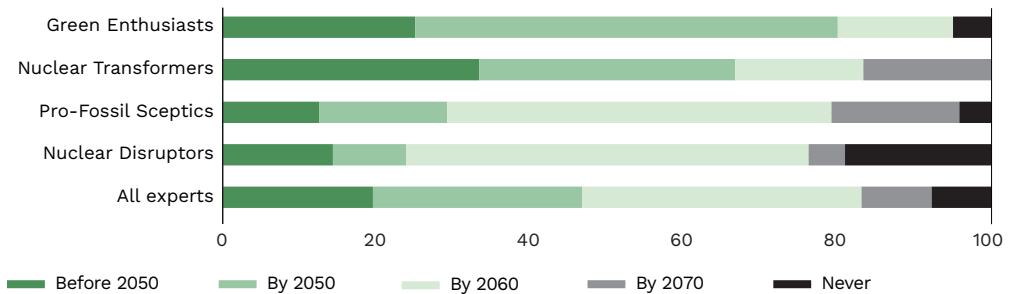
**Chart 9. Attitudes of experts and their opinions on the number of EU climate policy targets, achieved on time (percentage of responses)**



Source: prepared by PEI.

Depending on their attitudes, experts differ in their assessment of the EU's pursuit of climate neutrality. **More than 65% of Green enthusiasts and Nuclear transformers believe that the EU will achieve climate neutrality by 2050.** More than twice as many Pro-Fossil Sceptics and Nuclear Disruptors hold this view. **As many as 24% of Nuclear Disruptors and 21% of Pro-Fossil Sceptics believe that climate neutrality will be achieved after 2070 or never; however, only 5% of Green Enthusiasts and 17% of Nuclear Transformers hold this view.**

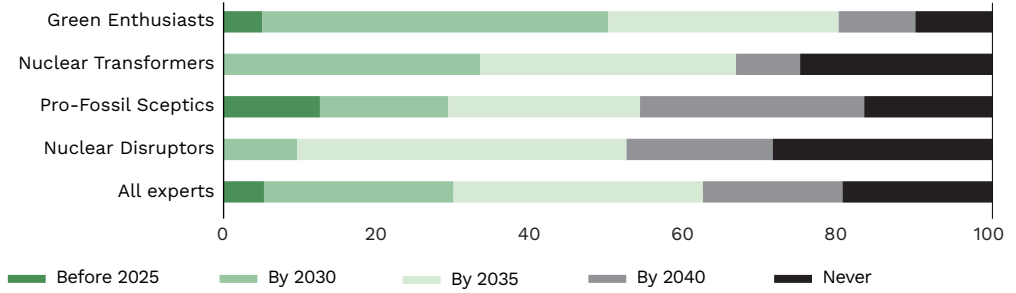
**Chart 10. Experts' opinions on the date of achieving climate neutrality by the EU (%)**



Source: prepared by PEI.

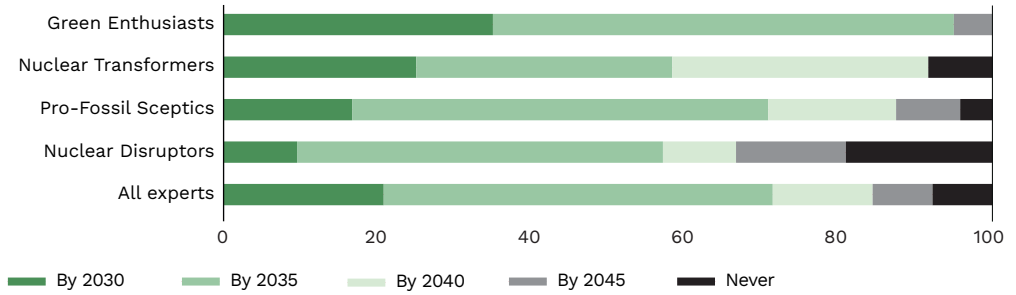
**Regardless of their attitudes, the majority of experts believe that the use of fossil fuels as a heating source in new buildings and as fuel in new cars will be banned by 2035.** More than 35% of Green Enthusiasts and 25% of Nuclear Transformers believe that in the case of cars, the ban will be implemented earlier, i.e. by 2030; however, only 17% of Pro-Fossil Sceptics and 10% of Nuclear Disruptors share this view. Earlier than in 2035, the ban on fossil fuel heating sources in the construction industry is expected by 50% of Green Enthusiasts, 33% of Nuclear Transformers, 29% of Fossil Sceptics and 10% of Nuclear Disruptors in their respective countries. In terms of construction, twice as many experts as for combustion engines stated that a ban would never be implemented.

**Chart 11. Date of introduction of the ban on fossil fuels in the buildings sector (%)**



Source: prepared by PEI.

**Chart 12. Date of introduction of the ban on the registration of combustion cars in the EU (%)**

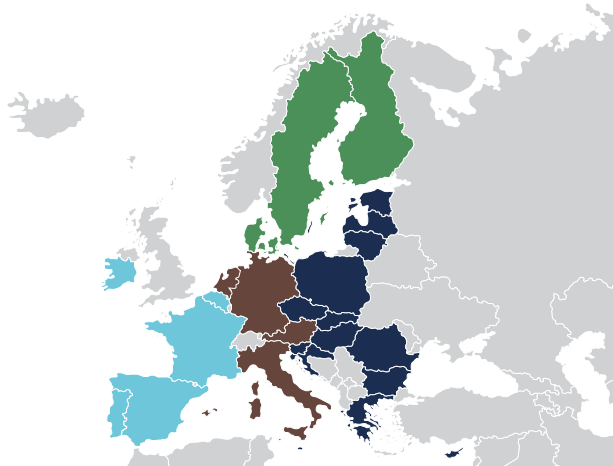


Source: prepared by PEI.

# Regional differences in experts' statements

The nature of the assessment of the achievement of national goals, partly related to the expert's confidence in the efficiency and reliability of the Member State represented, appeared to be more national than energy-related. The analysis of their opinions allowed to identify 4 cultural regions: **Nordic** – representing the countries of Northern Europe, **CEE** – connecting the countries of Central and Eastern Europe, **Central** – including Austria, the Netherlands, Germany and Italy, and **Western**, represented by Belgium, France, Ireland, Spain and Portugal.

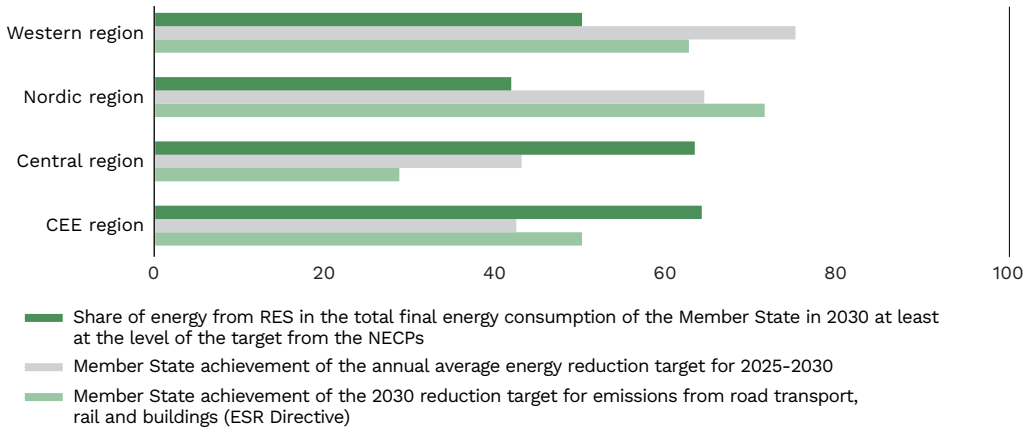
Mapa 2. The regions of the experts



Note: the Nordic region in green, CEE in blue, Central in brown, Western in turquoise.  
Source: prepared by PEI.

**The experts from Central Europe and CEE assessed the feasibility of meeting the RES target much more optimistically, but were sceptical about their country's reduction in energy consumption and emissions from buildings and road transport than the experts from Western and Northern Europe.** Only 29% of these from Central Europe were convinced that their country would meet the ESR targets, twice as low as in the other regions. 71% of the Nordic region experts declared that their country would meet the objectives from the directive. Experts from the Western region were the most optimistic about reducing energy consumption, with 75% believing that their country would meet the target in this respect. CEE experts appeared to be the most sceptical about reducing energy consumption, with only 42% of them believing that the national target would be met.

**Chart 13. National climate goals vs the region represented by the expert (%)**



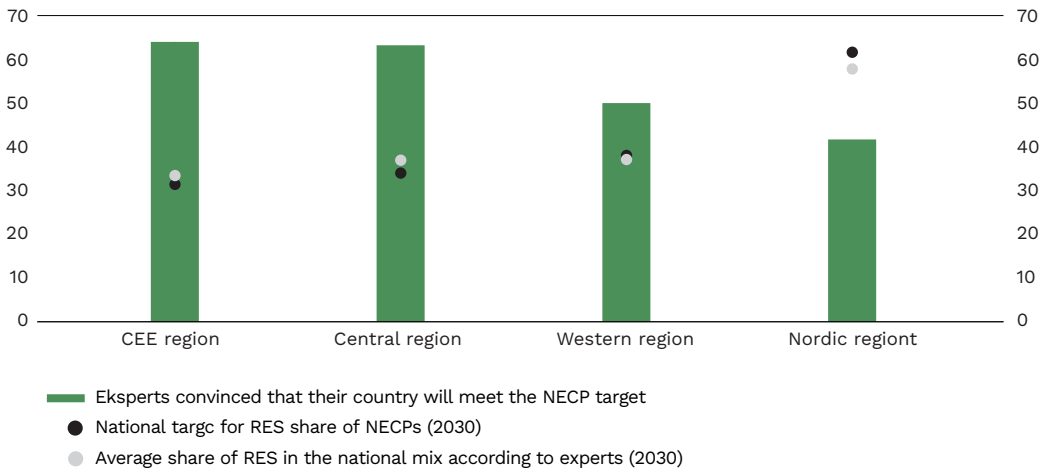
Source: prepared by PEI.

**64% of experts representing Central and Eastern European countries reckoned that the state would achieve the RES target specified in the National Energy and Climate Plans (as of November 2023),** i.e. 63% of the experts from Central Europe, 50% from Western Europe and only 42% from the Nordic region, respectively. Countries from this region have adopted significantly higher goals in the area of RES than countries from Central and Central-Eastern Europe. According to the experts, the expected share of RES in the national energy mix in 2030 will be 58% in the Nordic region, 37% in the western and central regions and 33% in the CEE region. **The higher the climate goals of the experts' state, the greater their scepticism about the possibility of implementation.**<sup>1</sup> However, most experts sceptical of the national target believe that the difference between the target and its implementation will not be higher than 7%. More than 74% believe that the difference between the national goal declared and the achieved will be no more than 5 percentage points. **After aggregating experts' opinions, the average differences between the value of the RES target and its implementation within regions are no more than 3%.**

<sup>1</sup> The Pearson correlation value of the variables "RES share in 2030 according to the NAPE" and "expert's projected RES share" was -0.35. Significance obtained by the chi-square stochastic independence test = 0.0057.



Chart 14. National target for RES share in the energy mix vs. experts' opinions (% of responses)

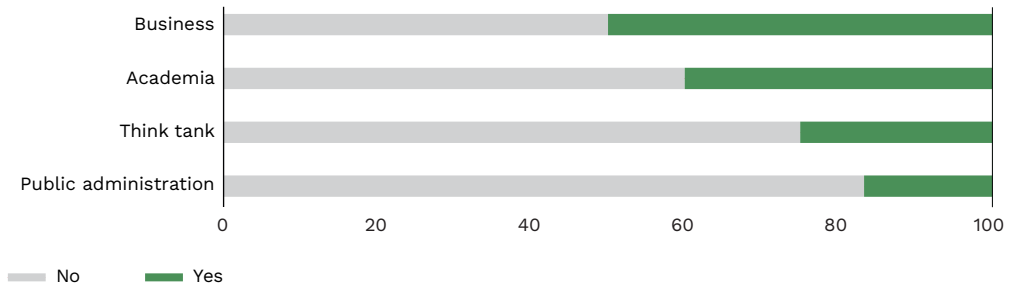


Source: prepared by PEI.

## Opinions depending on the environment represented by the experts

The group of experts participating in the study was diverse. They represented national and European administration, private enterprises, consultants, analysts from think tanks, social activists and researchers. 28 think tank analysts, 25 researchers, 16 business representatives and 6 representatives of public administration participated in the study. **The expert's institutional affiliation had a significant impact on his/her declarations regarding the unification of the ETS system, the EU's climate neutrality in 2050, the most important energy sources in the green transformation process and, to a lesser extent, the feasibility of national objectives in terms of the share of RES in the energy mix and the reduction of emissions in transport and construction.**

**Chart 15. Assessment of the chances of a single ETS for all GHG emissions depending on the institution represented by the expert (%)**

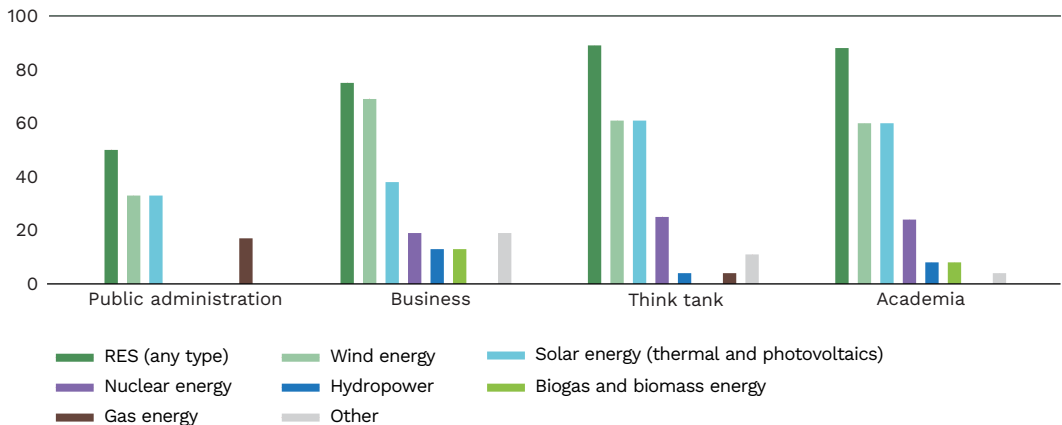


Source: prepared by PEI.

**Indeed, half of the experts with a business background were of the opinion that in the future the ETS would be standardised for all types of emissions.**

From a business perspective, such a solution could be more transparent and more convenient for certificate trading than systems that are more complex and dependent on public policies in individual areas of the economy. Much more sceptical towards such a vision were representatives of administrations and think tanks, who continuously monitor the trends and challenges of ETS expansion. **More than 70% of those from think tanks and the administration believed that a unified ETS would never be introduced.**

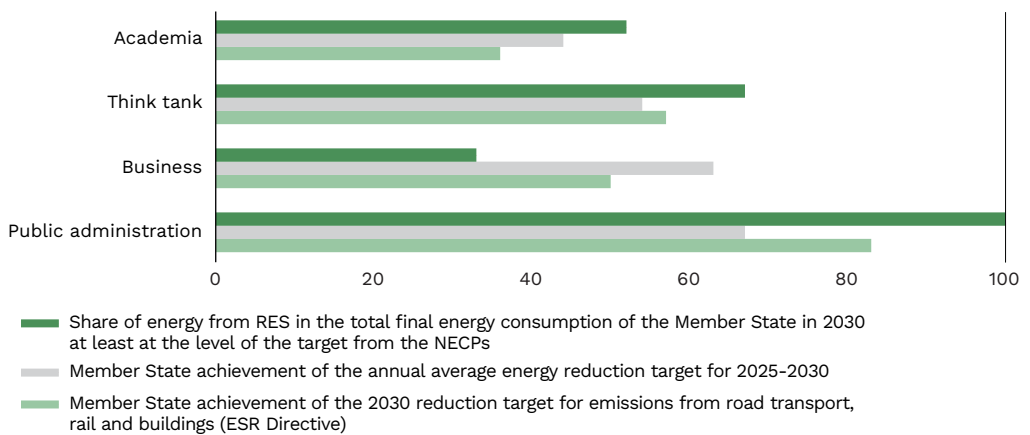
**Chart 16. Institutions represented by experts vs types of energy that will play a key role in the transformation of the electricity sector (% of responses)**



Source: prepared by PEI.

**Representatives from think tanks and academia were more likely to point to solar PV and nuclear power as key energy sources for transforming the electricity sector.** More than 85% of those from the academia and think tanks indicated that RES played a key role. **Those associated with academia were most likely to point to the future role of nuclear energy combined with RES, with 20% of respondents supporting the key role of such a mix.** Experts from the business community, on the other hand, were the biggest supporters of the development of wind energy, with almost 69% of such experts in favour. Representatives from the administration were slightly more likely to indicate a vital role for gas power, and more likely to indicate no key energy source.

**Chart 17. National climate objectives vs the type of institution represented by the expert (%)**



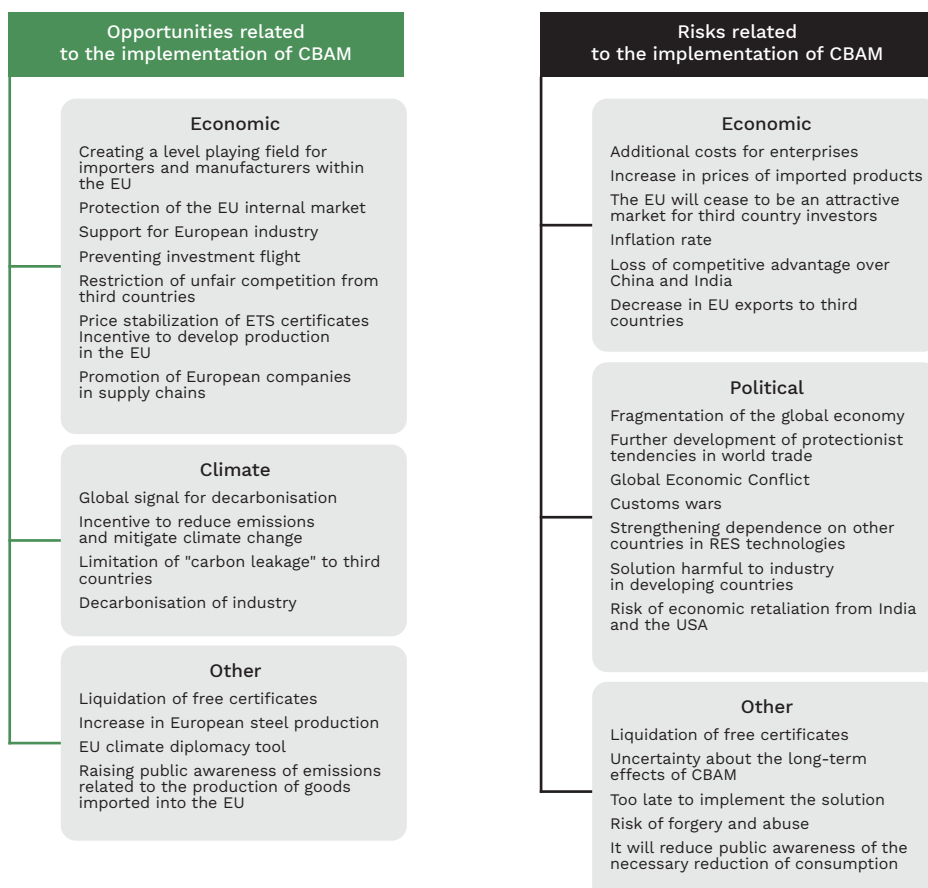
Source: prepared by PEI.

**The experts from public administration were the most optimistic about meeting the national target.** Representatives of the business community, although moderately optimistic in other areas, were the most sceptical about the achievement of the RES share target in the mix, with 66% of them believing that the national target would not be met on time. **Business and administration tend to be more positive than academia and think tanks and believe that the national energy reduction targets will be met on schedule.** In the area of reducing emissions from transport and construction, representatives of think tanks are also the most confident, along with public administration, in achieving the national targets (57%).

# CBAM. Experts on the opportunities and risks of implementing a carbon duty

The controversy surrounding the Carbon Border Adjustment Mechanism (CBAM), the so-called "carbon duty", has been reflected in experts' responses. Depending on the institution and region represented, they indicated different risks and opportunities related to the introduction of CBAM. The experts' open written statements indicating the advantages and disadvantages of the solution were anonymised (experts were numbered from E1-E77), only the region and the type of institutions were disclosed.

**Infographic 2. Opportunities and risks of CBAM in the opinions of the surveyed experts**



Source: prepared by PEI.

The advantages of CBAM are primarily economic and climate-related. CBAM would help to "create a level playing field for European businesses competing with China and the US" (E1, central region, think tank). CBAM is supposed to prevent 'carbon leakage', i.e. the relocation of carbon-intensive investments outside the EU, and reduce 'unfair competition' from third countries. It is also supposed to be a new climate change mitigation measure that will 'finally enable the decarbonisation of iron, steel and cement production (E2, Nordic region, academia) by putting a 'real price on third country emissions' (E3, CEE region, think tank). Some of the experts who were more enthusiastic about CBAM provocatively did not point out its drawbacks at all, stressing only the urgency of such a solution:

*The greatest risk would be not to take any action to reduce CO<sub>2</sub> emissions. The biggest benefit will be the introduction of incentives to maintain and return investments and jobs to the EU.*

*(E4, Nordic region, scientific community)*

*The biggest advantage of CBAM is that it keeps ETS certificate prices high, thus encouraging emission reductions and making low-carbon investments profitable within the EU industry.*

*The greatest risk of CBAM is the escalation of international tensions, which may lead to a spiral of international tensions.*

*(E5, Western region, think tank)*

The risks associated with CBAM are primarily political and economic. The experts often point to the risk of "trade wars", "fragmentation of the global economy" and a potential protectionist response from China, the US and India. However, many experts raise the issue of the risks of rising prices of imported goods in Europe, inflation and a decrease in the competitiveness of European exporters. They are also concerned about the 'imbalance' and 'limited efficiency' of the solution, which is expected to be exposed to the risks of numerous 'counterfeits':

*In practice, we will not be able to monitor and control the entire supply chain. Entrepreneurs will be able to circumvent CBAM easily. Moreover, heavy industry exporting its goods to the EU will raise prices by the cost of CBAM. The solution will not force anyone to change technology and, as a result, we will pay more for the same products in Europe.*

*(E6, CEE region, scientific community)*

The advantage of CBAM, indicated by experts from think tanks, is the creation of systemic incentives for decarbonization and the transfer of European climate policy to the global level. Some experts even point to the possibility of "EU world leadership in the field of low-emission production" if the implementation is not "prevented by reluctant Member States" (E7, Western region, think tank). CBAM's rhetorical benefit for green transition advocates is to neutralise the bogey of investment flight:

*The main advantage of CBAM is the elimination of the "bugbear" in the form of carbon leakage. This removes one of the main barriers to effective climate action, especially in energy-intensive industries.*

*(E8, central region, think tank)*

A slightly different view of CBAM is expressed by experts from the business community. Their main concern is the issue of 'fair competition' in the EU market between EU and non-EU companies, a 'level playing field' on which they can compete (E8, Nordic region, business). Many hope that CBAM will reduce imports of carbon-intensive goods and fossil fuels and make the EU partly economically independent. However, entrepreneurs are particularly afraid of the high costs that the new solution may bring, both for companies and for the EU as a whole, and will be hard to offset:

*Advantage: The polluter pays. Risks: Loss of EU competitiveness and difficulty in balancing the burdens of CBAM and ETS.*

*(E9, CEE region, business)*

Public administration representatives place CBAM in the broader context of EU and Member State public policies. CBAM is supposed to be an 'EU climate diplomacy tool' (E10, CEE region, public administration), which stabilises ETS prices and price risks. Representatives of the public sector are concerned about the uncertainty regarding the 'additional, unforeseen effects' of this 'difficult solution', which will ultimately lead to its circumvention. They also highlight the multi-faceted impact of CBAM on public awareness of climate change:

*CBAM means raising public awareness of emissions related to trading with non-EU actors. However, it carries a risk - it diverts attention from the need to reduce consumption, which is necessary to reduce climate change (CBAM and ETS).*

*(E11, Western Region, Public Administration)*

Academics point to measurement and political difficulties. A CBAM that 'protects the EU internal market' could 'aggravate global tensions', trigger a 'trade war' and develop rivalry tendencies between countries. Some hope that CBAM will encourage the development of new technologies. Representatives of academia point to several risks associated with the uneasy implementation of a solution "that allows for a reality check of emission intensity reductions outside the EU" (E12, Nordic region, scientific community), while others point to the risk of CBAM being "over-regulated". The adequacy and precision of this solution will be crucial to the success of CBAM:

*CBAM can create a fair, level playing field for all market actors and a systemic advantage for low-carbon manufacturing technologies. However, I am concerned that its suboptimal implementation will leave a number of legal loopholes.*

*(E13, central region, scientific community)*

Interestingly, abolishing the allocation of free ETS certificates was an advantage for some surveyed experts from academia and think tanks and a disadvantage for some administration representatives:

*Benefits: abolition of free ETS certificates. Risks: Decrease in the competitiveness of ETS-covered industries producing for export to third countries.*

*(E14, CEE region, scientific community)*

*A plus is that CBAM will be a new instrument of European climate diplomacy. A minus is that free ETS certificates will be abolished.*

*(E15, CEE region, public administration)*

# Conclusions

The results of a study conducted by the Polish Economic Institute show significant differences in experts' opinions on the *Fit for 55* package. Experts differ in their assessment of actions taken to combat climate change, both at national and EU level. The report systematises observations on the significant differences in the perception of EU climate policy that were identified at the level of the regions and communities represented by the respondents.

The report identifies two main strands of argument within the European energy sector: the future of nuclear power and the electrification of individual and district heating. These issues can be framed by 4 types of attitudes held by European experts: Pro-Fossil Sceptics, Nuclear Disruptors, Nuclear Transformers, and Green Enthusiasts, varying in their assessment of the feasibility of EU climate policy goals. One can expect the differences among these attitudes to grow as European climate policy develops. The ability to forge an inclusive yet ambitious compromise in these areas will be crucial for the next steps on the path to climate neutrality for the Community.

Regional differences have a noticeable impact on the experts' opinions regarding targets. Respondents from Central and Central and Eastern Europe believe that their countries will meet the targets for the share of renewable energy, but are more sceptical about the reduction in energy consumption and emissions in construction and road transport when compared to experts from Western and Northern Europe.

The institutions that the respondents represented are also of significance. An expert's institutional affiliation in academia, business, think tank or administration influences their judgement on the direction and pace of the EU energy transition. Representatives of business and administration appear more sceptical about the achievement of renewable energy share targets, in contrast to academics and think tanks, who show more optimism. Business and academics allow for a single ETS for all types of emissions, the administration and think tanks are distanced from it.

The experts' different views clearly show the challenges and feedback concerning the feasibility of meeting ambitious climate targets in the EU. Understanding the divisions and recognising the associated barriers to development may allow us to spot new, politically non-obvious areas of cooperation, thus giving a new impetus to European climate policy.

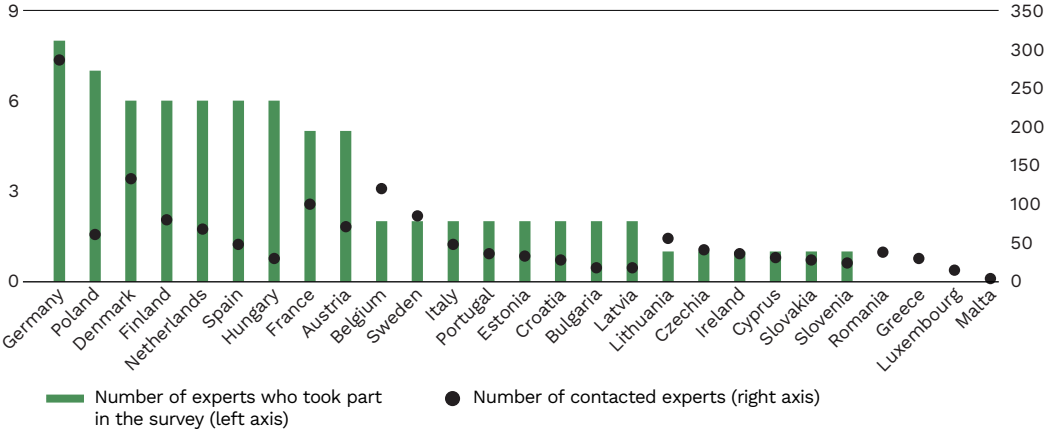


# Methodological Annex.

## Description of the Study

The study was carried out by means of a closed electronic online survey distributed to experts. The survey contained 10 questions on specific regulations included in the *Fit for 55* package and 3 additional questions on the energy transition. The survey was distributed to 1,566 experts from all EU Member States. In selecting the respondents, we were guided by their knowledge and experience related to the energy transition, energy policy and environmental protection. The list of experts was based on an analysis of institutions active in these areas identified through background data analysis. The identification process included searches in four key sectors: national administrations of Member States, energy sector companies, the scientific research sector and think tanks addressing energy and climate issues.

**Chart 18. Countries represented by experts contacted and surveyed**



Source: prepared by PEI.

The survey was conducted between 02<sup>nd</sup> August and 11th September 2023 and we received 77 responses from experts in 23 EU Member States. The aim was to create a pan-European expert panel. The most represented group in the survey was made up of experts from Germany (8 people), Poland (7 people) and Denmark, Finland, the Netherlands and Spain (6 people each). Despite more than 100 contact attempts, no responses were received from experts from Romania, Greece, Luxembourg and Malta.

Basic questions in the survey:

1. Will the country you represent achieve its objective under the ESR Regulation?
  - Yes
  - No
2. Will the country you represent achieve an average annual energy savings target of 1.5% of final energy consumption between 2025 and 2030?
  - Yes
  - No
3. Will the share of renewable energy sources (RES) in the final energy consumption in the EU be 42.5% in 2030? (in 2021, the share of RES was 21.8%)
  - Yes
  - No
4. What will be the share of RES in the final energy consumption in the country you represent in 2030? (open question)
5. Which heating source will dominate the country you represent in 2030?
  - Hard coal
  - Natural gas
  - Electricity
  - Hydrogen
  - Biomass
  - Other
6. When will fossil fuel heating systems be banned in the country you represent?
  - By 2030
  - By 2035
  - By 2040
  - Never
7. Will there be one common EU ETS for all regulated sectors? With one common price?
  - Yes
  - No

8. Name one most significant benefit and one most significant risk to the EU economy associated with the introduction of CBAM. (open question)
9. When will the ban on the sale of new passenger cars with petrol and diesel engines in the EU come into force?
- By 2030
  - By 2035
  - By 2040
  - By 2045
  - Never
10. Will sustainable aviation fuel (SAF) account for at least 70% of aviation fuel by 2050? (The share of SAF in 2022 was below 1%)
- Yes
  - No
11. Will the country you represent produce energy using nuclear power plants after 2040?
- Yes
  - No
12. When will the EU achieve climate neutrality?
- By 2050
  - In 2050
  - By 2060
  - By 2070
  - Never
13. Which energy sources will be most important for the decarbonisation of the EU electricity sector? (open question)

Respondent's particulars:

1. Email address (open question).
2. Country represented by the respondent (list of EU-27 countries).

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# The Polish Economic Institute

The Polish Economic Institute is a public economic think tank dating back to 1928. Its research primarily spans macroeconomics, energy and climate, foreign trade, economic foresight, the digital economy and behavioural economics. The Institute provides reports, analyses and recommendations for key areas of the economy and social life in Poland, taking into account the international situation.

