



Special Eurobarometer 492

Report

Europeans' attitudes on EU energy policy

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May 2019
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Survey requested by the European Commission,
Directorate-General for Energy
and co-ordinated by the Directorate-General for Communication

This document does not represent the point of view of the European Commission.
The interpretations and opinions contained in it are solely those of the authors.

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Directorate-General for Energy

Survey co-ordinated by the European Commission, Directorate-General for Communication
(DG COMM "Media monitoring and Eurobarometer" Unit)

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INTRODUCTION

One of the main priorities for Jean-Claude Juncker when he became President of the European Commission was to establish an Energy Union which ensures the clean, secure and affordable supply of energy to all Europeans.

In the course of its 5-year mandate, the Juncker Commission has initiated a range of changes to EU energy policy to build this Energy Union and address the challenge of global warming. Having helped to negotiate the **Paris Agreement** in December 2015, many of the subsequent policy changes have been aimed at enabling the EU to deliver on its Paris Agreement commitments to reduce greenhouse gas emissions and more broadly on accelerating the clean energy transition. In particular, the **Clean energy for all Europeans package**¹ establishes a new rulebook for EU energy policy which includes new, binding 2030 targets for energy efficiency and renewables and requires each Member State to establish its own integrated National Energy & Climate Plan for 2021-2030, outlining how it intends to fulfil its contributions to the EU-wide effort.

In this context of growing awareness of climate and energy issues among EU citizens, the European Commission is keen to develop a better understanding of attitudes towards EU energy policy. Whereas there have been regular Eurobarometer reports since 2008 looking at the evolution of citizens attitudes to climate change² – including Special Eurobarometer 490³ published in parallel with this report – there is no recent survey dedicated to what the European public thinks about the priorities for EU energy policy. Coming at a moment when the new legislative framework enters into force, this detailed poll provides a useful benchmark on public opinion. And it may serve to help the new Commission College, which is scheduled to take office in November 2019, to identify its priorities for the coming 5 years.

At the same time, new **EU energy label and ecodesign** rules are due for adoption in the course of 2019, and a new, rescaled energy label will apply at the point of sale from March 2021. With the only available figures for the recognition of this important EU instrument dating back to a 2014 study⁴, it is high time to have more precise insight into how widely the EU energy label is known. Since we need to improve energy efficiency in the coming years and given the important role of consumers, these detailed statistics on the recognition of the EU energy label will be important for our communication efforts on the changes ahead.

In this context, this survey seeks to gauge, for the first time, EU citizens' opinions about aspects of EU energy policy in order to:

- Review what citizens think EU energy policy is about currently and what it should aim to achieve;
- Assess awareness of and effectiveness of current energy efficiency labelling;
- Investigate what citizens believe the EU's priorities for energy policy should be in the next decade.

¹ <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans>

² See https://ec.europa.eu/clima/citizens/support_en#tab-0-1

³ See <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/special/surveyky/2212>

⁴ https://ec.europa.eu/info/sites/info/files/impact_of_energy_labels_on_consumer_behaviour_en.pdf

This survey was carried out by the Kantar network in the 28 EU Member States between 9 and 25 May 2019. Some 27,438 respondents from different social and demographic groups were interviewed face-to-face at home in their mother tongue. The survey was commissioned by the European Commission, Directorate General for Energy (DG ENER).

The methodology used is that of the Standard Eurobarometer surveys carried out by the Directorate-General for Communication ("Media monitoring and Eurobarometer" Unit)⁵. It is the same for all countries and territories covered in the survey. A technical note on the manner in which interviews were conducted is appended as an annex to this report. Also included are the interview methods and confidence interval⁶.

Note: In this report, countries are referred to by their official abbreviation. The abbreviations used in this report correspond to:

| | | | |
|--|------|-----------------|------|
| Belgium | BE | Lithuania | LT |
| Bulgaria | BG | Luxembourg | LU |
| Czechia | CZ | Hungary | HU |
| Denmark | DK | Malta | MT |
| Germany | DE | The Netherlands | NL |
| Estonia | EE | Austria | AT |
| Ireland | IE | Poland | PL |
| Greece | EL | Portugal | PT |
| Spain | ES | Romania | RO |
| France | FR | Slovenia | SI |
| Croatia | HR | Slovakia | SK |
| Italy | IT | Finland | FI |
| Republic of Cyprus | CY * | Sweden | SE |
| Latvia | LV | United Kingdom | UK |
| European Union – weighted average for the 28 Member States | | | EU28 |

* Cyprus as a whole is one of the 28 European Union Member States. However, the 'acquis communautaire' has been suspended in the part of the country which is not controlled by the government of the Republic of Cyprus. For practical reasons, only the interviews carried out in the part of the country controlled by the government of the Republic of Cyprus are included in the 'CY' category and in the EU28 average.

We wish to thank the people throughout the European Union

who have given their time to take part in this survey.

Without their active participation, this study would not have been possible.

⁵ <https://ec.europa.eu/commfrontoffice/publicopinion>

⁶ The results tables are annexed. It should be noted that the total of the percentages indicated in the tables in this report may exceed 100% when the respondent was able to choose several answers to the same question.

KEY FINDINGS

EU energy policy is about moving away from fossil fuels, decreasing consumption and lowering energy prices

- Four in ten (41%) respondents say EU energy policy means shifting from fossil fuels to renewable energy sources to combat climate change.
- Over a quarter of respondents say they think EU energy policy means decreasing energy consumption across the EU (28%) or more competitive energy prices for consumers (27%).

Strong agreement that EU should focus on ensuring access to secure, clean, affordable energy

- Over nine in ten respondents agree the EU must secure access to energy to all EU citizens (92%).
- Nine in ten respondents agree the EU must ensure access to clean energy, e.g. encourage a move away from fossil fuels towards energy sources with low greenhouse gas emissions (90%).
- Just under nine in ten respondents (89%) agree the EU must ensure access to affordable energy, e.g. ensure competitive market prices, in particular to reduce the number of people unable to pay their energy bills.
- Over nine in ten respondents (91%) think cooperation between European Member States should be further strengthened to give all Europeans access to secure, financially affordable and clean energy.

Respondents say cooperation is essential to ensure a secure energy supply

- Nearly nine in ten respondents (89%) say they agree it is necessary to have a well-connected energy network across the EU to ensure access to secure energy.
- Almost nine in ten respondents (88%) also agree it's necessary to reinforce EU cooperation across borders and solidarity between Member States in the event of energy crises to ensure access to secure energy.

Access to clean energy requires EU investment in research and technology

- Over nine in ten respondents (92%) say the EU should 'encourage more investment in energy research and innovation' to ensure access to clean energy.
- Nine in ten of those surveyed (90%) say they agree the EU should 'encourage more investment in renewable energy, e.g. wind, solar' to secure access to clean energy'.

The EU needs to act to ensure access to affordable energy

- Nine in ten respondents (90%) agree that it should be the EU's responsibility to 'address energy poverty and ensure a fair energy transition so that no citizen or region is left behind'.
- Almost nine in ten respondents (88%) agree the EU should 'ensure that increased competition in EU energy markets translates into more competitive and affordable prices for consumers'.

EU energy labelling is well-known among respondents and influences purchasing decisions

- Nearly eight in ten respondents say they recognise energy labelling and know what it stands for (79%), while over a tenth of those polled say they recognise the label but do not know what it stands for (14%).
- Only just over one in 20 respondents (7%) has never seen the labelling.
- Half of the respondents (50%) say the European Union is responsible for the label, which is by far the most-given answer.
- Over a fifth of respondents (21%) say they 'don't know' who is responsible for the label.
- Nearly eight in ten respondents say the label did have an influence on their choice of purchase of electric appliances (79%), while just under a fifth of those surveyed say it has not influenced their purchase choice (19%).

The EU should prioritise clean and more affordable energy in the future

- Nearly half of those polled say they think the EU should invest in and develop clean energy technologies (47%) in the next ten years, this being the most common answer among the respondents, while a third say they think it ought to step up international efforts to reduce the impact of energy on climate change (33%).
- Just under four in ten respondents say they believe the EU should ensure energy costs are as low as possible (37%).

I. PERCEPTIONS OF THE EU ENERGY POLICY

Combatting climate change is the main reason for EU energy policy according to European respondents

Firstly, a definition of fossil fuels was read to respondents⁷. After this definition was read, respondents were asked what EU energy policy means to them⁸. Four in ten (41%) respondents say it means **shifting from fossil fuels to renewable energy sources to combat climate change**, this being the most given answer among them. Over a quarter of respondents say they think it means **decreasing energy consumption across the EU** (28%) and **more competitive energy prices for consumers** (27%), while under a quarter say it means **contributing to economic growth and employment by investing in innovative technologies** (24%).

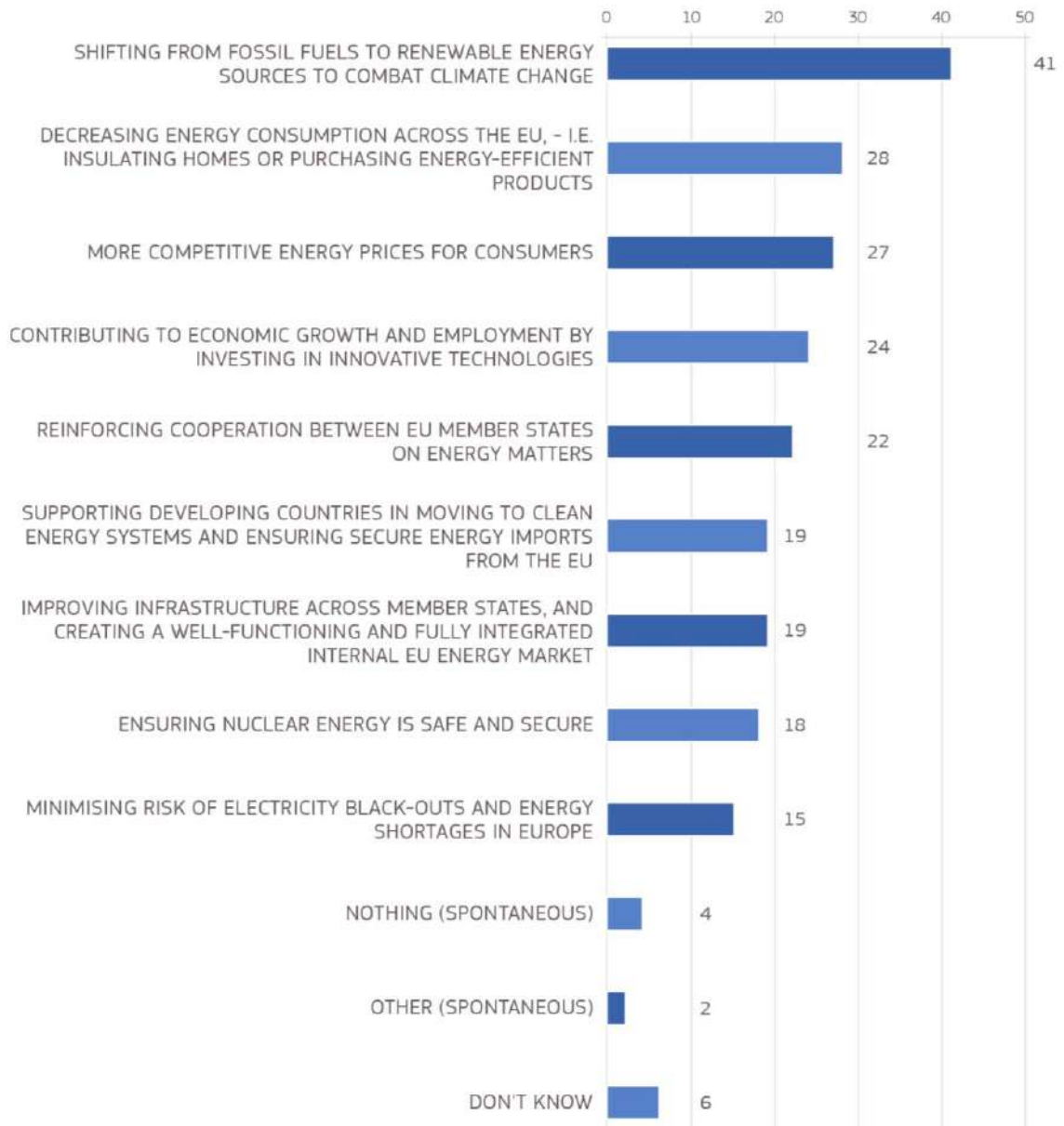
Just over one in five respondents say they think EU energy policy means **reinforcing cooperation between EU Member States on energy matters** (22%) and just under a fifth say they think it's about **supporting developing countries in moving to clean energy systems and ensuring secure energy imports from the EU** (19%). The same proportion of respondents say they think it means **improving infrastructure across Member States, and creating a well-functioning and fully integrated internal EU energy market** (19%) and just under that proportion say EU energy policy means **ensuring nuclear energy is safe and secure** (18%). Only 15% of respondents say EU energy policy means **minimising risk of electricity black-outs and energy shortages in Europe**, which is the least given answer.

Less than one in 20 respondents say **nothing** (4%), while just 2% say **other** and 6% say they **don't know**.

⁷ "fossil fuels are natural fuels such as coal, oil or gas, formed in the geological past from the remains of living organisms. Their combustion by humans is the largest source of greenhouse gas emissions."

⁸ What does EU energy policy mean to you? Reinforcing cooperation between EU Member States on energy matters; Improving infrastructure across Member States, and creating a well-functioning and fully integrated internal EU energy market; Minimising risk of electricity black-outs and energy shortages in Europe; Shifting from fossil fuels to renewable energy sources to combat climate change; Decreasing energy consumption across the EU, - i.e. insulating homes or purchasing energy-efficient products; Ensuring nuclear energy is safe and secure; Supporting developing countries in moving to clean energy systems and ensuring secure energy imports from the EU; Contributing to economic growth and employment by investing in innovative technologies; More competitive energy prices for consumers; Other (SPONTANEOUS); Nothing (SPONTANEOUS); DK.

QB1 What does EU energy policy mean to you? (MAX. 3 ANSWERS)
 (% - EU)



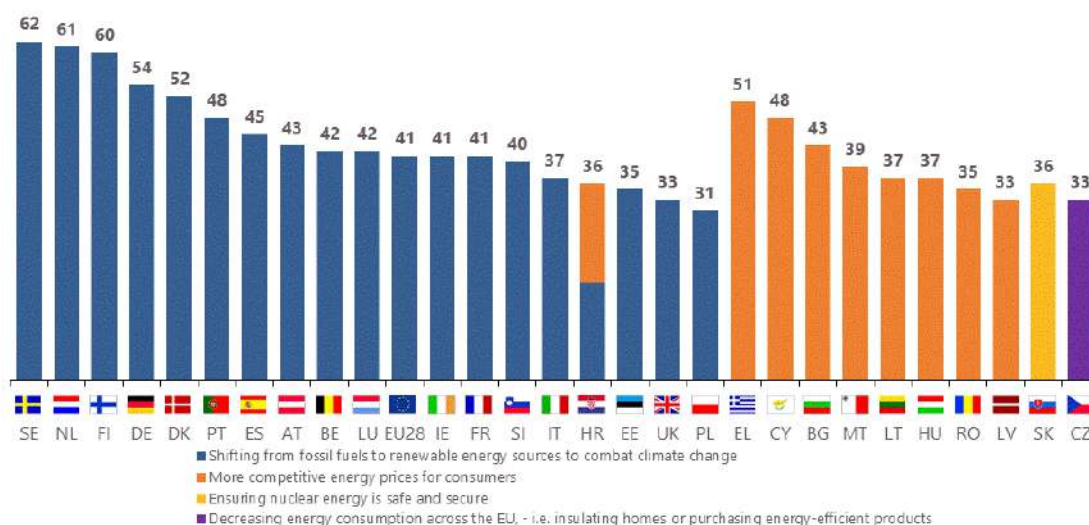
Base: All respondents (n=27,438)

At a national level, **shifting from fossil fuels to renewable energy sources to combat climate change** is the most-given answer in 17 of the EU's 28 Member States and the joint most popular response in one other: Croatia (36%). At least six in ten respondents give this answer in Sweden (62%), the Netherlands (61%) and Finland (60%) and a majority in Germany (54%) and Denmark (52%) also say this.

In eight of the EU's Member States, **more competitive energy prices for consumers** is the most given response to this question and it is the joint top answer in Croatia (36%). A majority of respondents in Greece (51%) say this and at least a third of those surveyed in the other countries in which it is the top answer agree.

Two other responses are among the most-mentioned. The top response among respondents in Slovakia is **ensuring nuclear energy is safe and secure** (36%), while the most given answer in Czechia is **decreasing energy consumption across the EU** (33%).

QB1 What does EU energy policy mean to you? (MAX. 3 ANSWERS)
 (% - THE MOST MENTIONED ANSWER BY COUNTRY)



Base: All respondents (n=27,438)

Of all the possible responses, **shifting from fossil fuels to renewable energy sources to combat climate change** is the most popular, it being among the top three responses in all but one EU Member State: Bulgaria (24%). It ranks as the number one response in 18 Member States, is the second most-mentioned answer in seven more and is the third most popular response in two: Lithuania (33%) and Romania (30%).

In nine EU Member States, **more competitive energy prices for consumers** is the most-given response, while it is the second most popular answer in six and the third most-given answer in another six. It does not appear among the top three responses in seven EU countries.

While **decreasing energy consumption across the EU** is the most-mentioned answer in just one country – Czechia (33%) – it is the second most-given answer in 11 Member States and the third most-popular response in six others.

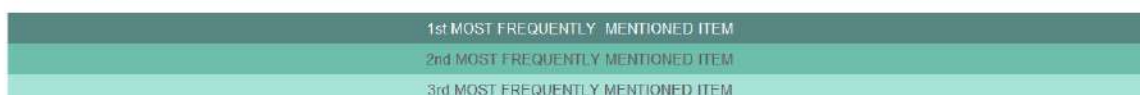
Ensuring nuclear energy is safe and secure is the top response in one country – Slovakia (36%) – is the second most popular answer in three more and the third most mentioned in two: Bulgaria (28%) and the United Kingdom (17%). However, it is not among the top three responses in the remaining 22 EU Member States.

In five EU countries, **reinforcing cooperation among EU Member States on energy matters** is the second most frequently given answer and the third most popular response in three: Belgium, Luxembourg (both 29%) and Finland (27%). The second most frequently given answer in Italy is **contributing to economic growth and employment by investing in innovative technologies** (34%) and this is the third most-given answer in 10 other EU Member States.

The response “**Improving infrastructure across Member States, and creating a well-functioning and fully integrated internal EU energy market**” is the third most-given in Portugal (30%), Germany (26%) and Poland (20%), while **minimising risk of electricity black-outs and energy shortages in Europe** is the third most frequently given response in Bulgaria (28%). Only one response – **supporting developing countries in moving to clean energy systems and ensuring secure energy imports from the EU** – is not among the top three answers in any EU Member State.

QB1 What does EU energy policy mean to you? (MAX. 3 ANSWERS) (%)

| | Shifting from fossil fuels to renewable energy sources to combat climate change | Decreasing energy consumption across the EU, - i.e. insulating homes or purchasing energy-efficient products | More competitive energy prices for consumers | Contributing to economic growth and employment by investing in innovative technologies | Reinforcing cooperation between EU Member States on energy matters | Improving infrastructure across Member States, and creating a well-functioning and fully integrated internal EU energy market | Supporting developing countries in moving to clean energy systems and ensuring secure energy imports from the EU | Ensuring nuclear energy is safe and secure | Minimising risk of electricity black-outs and energy shortages in Europe |
|------|---|--|--|--|--|---|--|--|--|
| EU28 | 41 | 28 | 27 | 24 | 22 | 19 | 19 | 18 | 15 |
| BE | 42 | 31 | 31 | 25 | 29 | 20 | 19 | 28 | 23 |
| BG | 24 | 31 | 43 | 19 | 23 | 17 | 12 | 28 | 28 |
| CZ | 29 | 33 | 28 | 15 | 20 | 15 | 12 | 27 | 21 |
| DK | 52 | 28 | 20 | 21 | 32 | 19 | 20 | 14 | 13 |
| DE | 54 | 32 | 23 | 18 | 32 | 26 | 21 | 14 | 17 |
| EE | 35 | 22 | 24 | 17 | 28 | 13 | 8 | 16 | 14 |
| IE | 41 | 25 | 32 | 22 | 14 | 17 | 20 | 22 | 13 |
| EL | 43 | 26 | 51 | 37 | 26 | 26 | 16 | 14 | 18 |
| ES | 45 | 20 | 36 | 34 | 12 | 17 | 20 | 14 | 10 |
| FR | 41 | 37 | 26 | 25 | 20 | 13 | 18 | 22 | 15 |
| HR | 36 | 30 | 36 | 27 | 19 | 18 | 18 | 13 | 19 |
| IT | 37 | 27 | 30 | 34 | 25 | 21 | 20 | 21 | 11 |
| CY | 44 | 34 | 48 | 28 | 26 | 21 | 15 | 12 | 10 |
| LV | 32 | 29 | 33 | 19 | 17 | 15 | 10 | 20 | 14 |
| LT | 33 | 23 | 37 | 21 | 22 | 10 | 12 | 36 | 18 |
| LU | 42 | 33 | 25 | 26 | 29 | 21 | 17 | 21 | 13 |
| HU | 35 | 33 | 37 | 19 | 25 | 15 | 16 | 14 | 18 |
| MT | 30 | 21 | 39 | 23 | 19 | 16 | 21 | 30 | 20 |
| NL | 61 | 51 | 8 | 30 | 28 | 23 | 24 | 16 | 18 |
| AT | 43 | 32 | 27 | 24 | 33 | 29 | 25 | 26 | 27 |
| PL | 31 | 26 | 26 | 20 | 19 | 20 | 19 | 16 | 19 |
| PT | 48 | 17 | 46 | 30 | 27 | 30 | 16 | 18 | 14 |
| RO | 30 | 32 | 35 | 22 | 18 | 23 | 21 | 15 | 13 |
| SI | 40 | 34 | 34 | 20 | 18 | 18 | 17 | 19 | 15 |
| SK | 30 | 27 | 29 | 17 | 20 | 15 | 14 | 36 | 26 |
| FI | 60 | 24 | 24 | 27 | 27 | 10 | 25 | 30 | 14 |
| SE | 62 | 23 | 7 | 33 | 38 | 17 | 30 | 20 | 7 |
| UK | 33 | 19 | 17 | 16 | 12 | 11 | 16 | 17 | 10 |










Base: All respondents (n=27,438)

The socio-demographic analysis for this question reveals some interesting differences and similarities:

- There are few differences between men and women.
- Age of respondents does not appear to be much of a determining factor, though those aged 55+ are the most likely to mention **more competitive energy prices for consumers** (29%), while those aged 15-24 are the most likely to mention **shifting from fossil fuels to renewable energy sources to combat climate change** (45%).
- Those respondents whose education finished below the age of 15 are the most likely to mention **more competitive energy prices for consumers** (34%), while those still studying and those whose education finished after the age of 20 are the most likely to give **shifting from fossil fuels to renewable energy sources to combat climate change** as their response (both 49%).
- Managers (28%) are the most likely to give **reinforcing cooperation between EU Member States on energy matters** as their answer, while the unemployed are the least likely (18%). Meanwhile, house persons (33%) are the most likely professional socio-demographic group to give **more competitive energy prices for consumers** as their answer, while managers (18%) are the least likely.
- The respondents who say they have difficulties paying their bills most of the time are the most likely to give **more competitive energy prices for consumers** (33%) as their answer.
- Respondents who identify as working class (32%) are twice as likely as those who identify as upper middle class (16%) to mention **more competitive energy prices for consumers**. In contrast, a majority of upper middle class respondents (51%) give **shifting from fossil fuels to renewable energy sources to combat climate change**, while just over a third of working class respondents say this (35%).
- Respondents who identify as 'left' on the political scale are the most likely to mention **shifting from fossil fuels to renewable energy sources to combat climate change** (49%) and the least likely to mention **more competitive energy prices for consumers** (24%).

QB1 What does EU energy policy mean to you? (MAX. 3 ANSWERS)
(% - EU)

| | Shifting from fossil fuels to renewable energy sources to combat climate change | More competitive energy prices for consumers | Reinforcing cooperation between EU Member States on energy matters |
|--|---|--|--|
| EU28 | 41 | 27 | 22 |
|  Gender | | | |
| Man | 42 | 26 | 23 |
| Woman | 41 | 28 | 22 |
|  Age | | | |
| 15-24 | 45 | 22 | 20 |
| 25-39 | 41 | 26 | 22 |
| 40-54 | 43 | 27 | 24 |
| 55 + | 40 | 29 | 22 |
|  Education (End of) | | | |
| 15- | 35 | 34 | 18 |
| 16-19 | 37 | 29 | 22 |
| 20+ | 49 | 23 | 26 |
| Still studying | 49 | 19 | 21 |
|  Socio-professional category | | | |
| Self-employed | 42 | 29 | 24 |
| Managers | 48 | 18 | 28 |
| Other white collars | 42 | 25 | 26 |
| Manual workers | 41 | 29 | 21 |
| House persons | 37 | 33 | 19 |
| Unemployed | 37 | 31 | 18 |
| Retired | 38 | 30 | 21 |
| Students | 49 | 19 | 21 |
|  Difficulties paying bills | | | |
| Most of the time | 34 | 33 | 22 |
| From time to time | 38 | 30 | 21 |
| Almost never/ Never | 43 | 26 | 23 |
|  Consider belonging to | | | |
| The working class | 35 | 32 | 17 |
| The lower middle class | 41 | 28 | 24 |
| The middle class | 44 | 27 | 24 |
| The upper middle class | 51 | 16 | 29 |
| The upper class | 47 | 23 | 36 |
|  Left-right political scale | | | |
| Left | 49 | 24 | 24 |
| Centre | 42 | 28 | 23 |
| Right | 38 | 28 | 22 |

II. THE EU ENERGY PRIORITIES

The vast majority of respondents agrees the EU must secure access to energy to all EU citizens

Respondents were asked how far they agree with four different statements about energy in the EU⁹. Over nine in ten respondents (92%) say they agree **the EU must secure access to energy to all EU citizens**, with six in ten saying they totally agree (61%) and three in ten (31%) saying they tend to agree. Less than one in ten respondents say they disagree with this statement (5%).

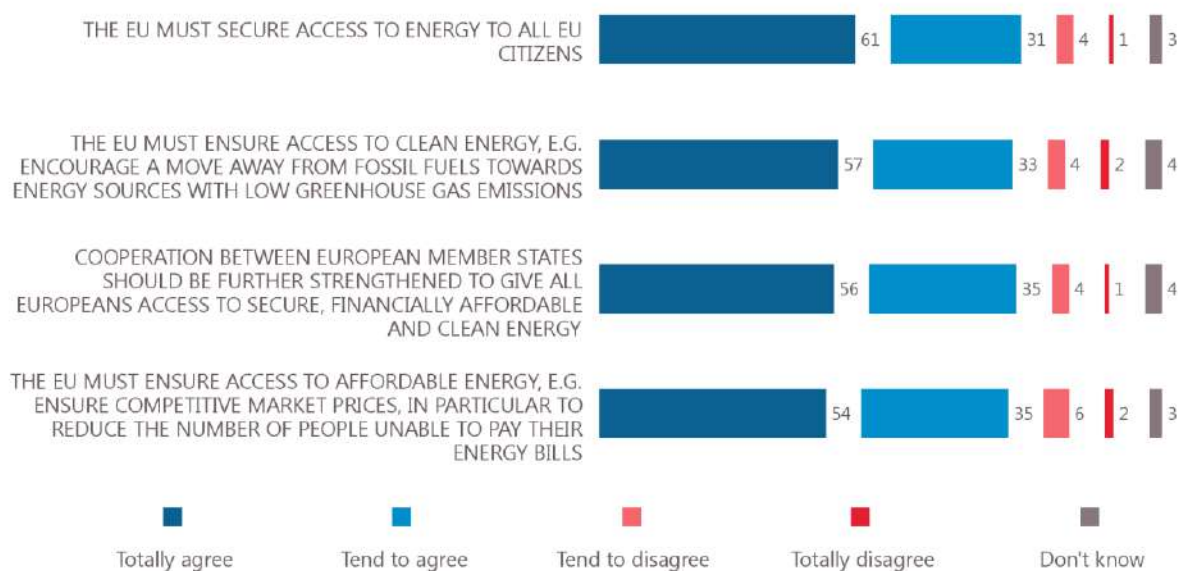
Nine in ten respondents (90%) say they agree **the EU must ensure access to clean energy, e.g. encourage a move away from fossil fuels towards energy sources with low greenhouse gas emissions**, a majority of whom (57%) **totally agree**. Less than one in ten respondents say they disagree with this (6%).

Over nine in ten respondents also agree **cooperation between European Member States should be further strengthened to give all Europeans access to secure, financially affordable and clean energy** (91%), with a majority (56%) saying they **totally agree**, while only 5% disagree.

Finally, just under nine in ten respondents (89%) say they agree **the EU must ensure access to affordable energy, e.g. ensure competitive market prices, in particular to reduce the number of people unable to pay their energy bills**. Again, a majority totally agree (54%), while just under a tenth of respondents (8%) **disagree** with this statement.

In all categories, no more than 4% of the respondents say they **don't know**.

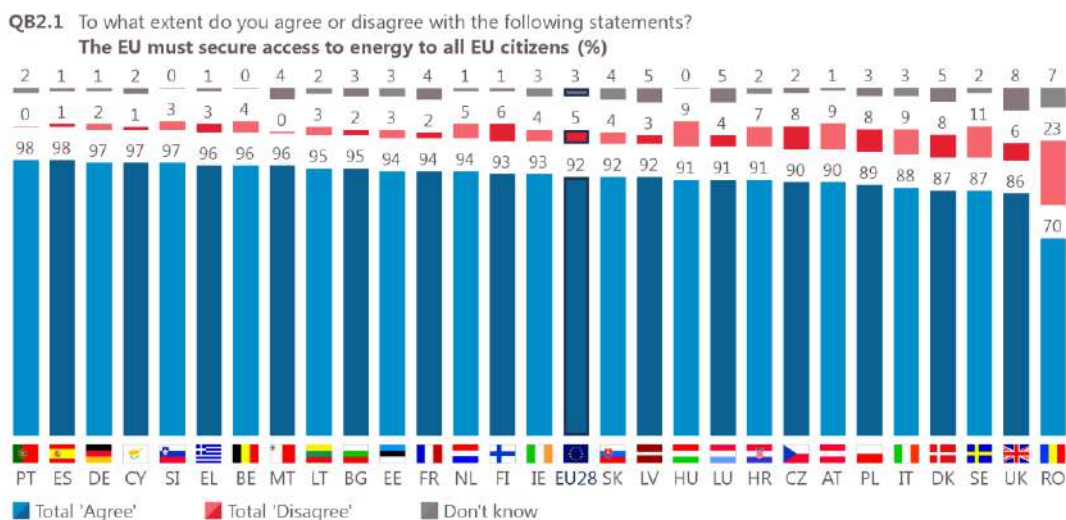
QB2 To what extent do you agree or disagree with the following statements? (% - EU)



Base: All respondents (n=27,438)

⁹To what extent do you agree or disagree with the following statements? The EU must secure access to energy to all EU citizens; The EU must ensure access to clean energy, e.g. encourage a move away from fossil fuels towards energy sources with low greenhouse gas emissions; The EU must ensure access to affordable energy, e.g. ensure competitive market prices, in particular to reduce the number of people unable to pay their energy bills; Cooperation between European Member States should be further strengthened to give all Europeans access to secure, financially affordable and clean energy.

At a national level, results are broadly similar in terms of the proportion of respondents who agree with the statement **'the EU must secure access to energy to all EU citizens'**, with one exception. At one end of the scale, almost all respondents in Portugal and Spain (both 98%) say they agree and almost the same proportion say the same in Cyprus, Germany and Slovenia (all 97%). Over eight in ten respondents in all but one country takes this view. The exception is Romania, where just seven in ten agree (70%). Nearly a quarter of respondents there (23%) disagree with the statement, though at the other end of the scale, no respondents disagree with it in Portugal and Malta while only 1% disagree in Cyprus and Spain.

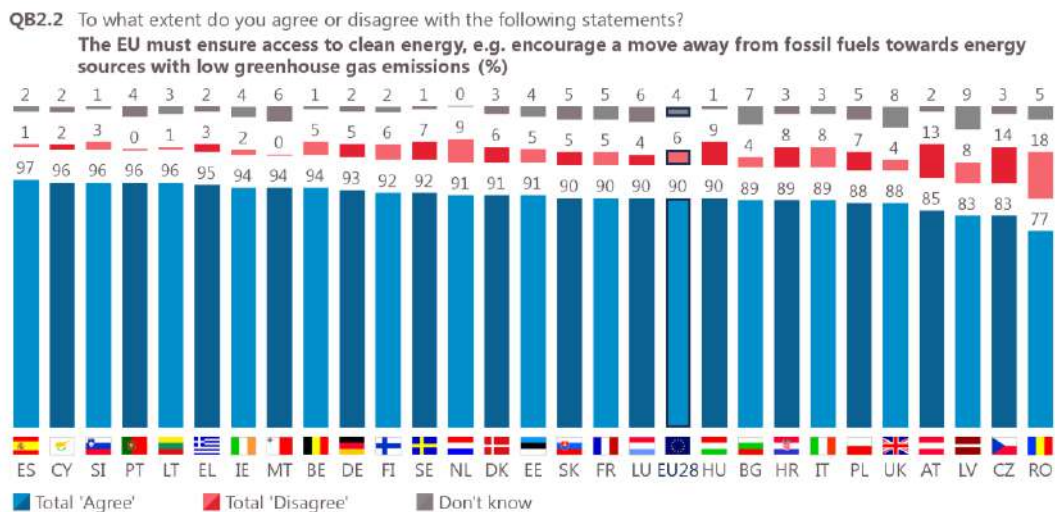


Base: All respondents (n=27,438)

The picture is broadly similar when it comes to respondents who agree **the EU must ensure access to clean energy, e.g. encourage a move away from fossil fuels towards energy sources with low greenhouse gas emissions.**

Over nine in ten respondents in 19 EU countries say they agree with the statement, with the highest levels of agreement being in Spain (97%), Cyprus, Slovenia, Portugal and Lithuania (all 96%). Only one country has a level of agreement below eight in ten respondents – Romania – where three quarters of those surveyed agree with it (77%).

Romania has the highest proportion of respondents who disagree with this statement (18%), followed by Czechia (14%) and Austria (13%). At the other end of the scale, no respondents in Portugal or Malta disagree with the statement, while only 1% disagree in Spain and Lithuania.

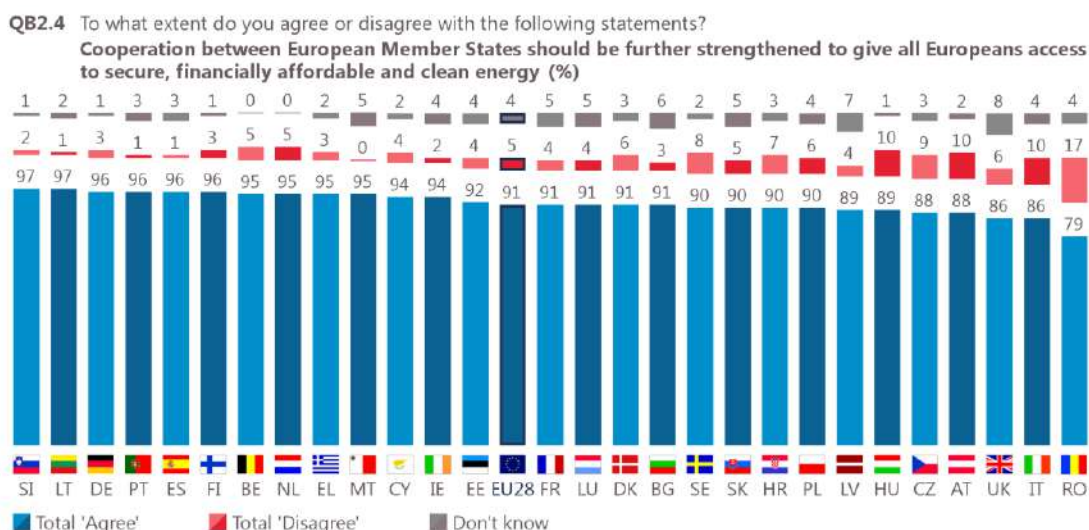


Base: All respondents (n=27,438)

The national-level variations follow a similar pattern for respondents who agree with the statement **'Cooperation between European Member States should be further strengthened to give all Europeans access to secure, financially affordable and clean energy'**.

At least nine in ten respondents in all but seven countries say they agree with this, with the highest proportions being found in Slovenia, Lithuania (both 97%), Finland, Germany, Portugal and Spain (all 96%). At the other end of the scale, Romania again has the lowest proportion of respondents who agree with the statement, with just under eight in ten saying this (79%).

Nearly one in five respondents in Romania disagree with the statement (17%), while one in ten of those surveyed in Austria, Italy and Hungary say the same (all 10%). In contrast, no respondents disagree with it in Malta, while just 1% disagree in Spain, Lithuania and Portugal.








Base: All respondents (n=27,438)

The socio-demographic analysis reveals few variations among the different groups:

- There are **few variations** when it comes to gender.
- Age of respondents appears to have little bearing on the responses they give, with **just two percentage points** separating the highest and lowest proportions of those surveyed agreeing with each statement.
- Respondents whose education finished below the age of 15 are the **least likely** to agree with any of the statements, while those still studying are the **most likely** to agree with all of them.
- **Students** are the most likely to agree with each of the statements, while **house persons** are the least likely, though the proportions of respondents agreeing are all very high.
- Respondents who say they have difficulties paying bills **most of the time** are the least likely group to agree with each statement, while those who **almost never or never** have difficulties are the most likely to agree with them.

QB2 To what extent do you agree or disagree with the following statements?

Total 'agree' (% - EU)

| | The EU must secure access to energy to all EU citizens | Cooperation between European Member States should be further strengthened to give all Europeans access to secure, financially affordable and clean energy | The EU must ensure access to clean energy) e.g. encourage a move away from fossil fuels towards energy sources with low greenhouse gas emissions | The EU must ensure access to affordable energy, e.g. ensure competitive market prices, in particular to reduce the number of people unable to pay their energy bills |
|--|--|---|--|--|
| EU28 | 92 | 91 | 90 | 89 |
|  Gender | | | | |
| Man | 92 | 91 | 91 | 89 |
| Woman | 91 | 91 | 91 | 89 |
|  Age | | | | |
| 15-24 | 92 | 92 | 92 | 91 |
| 25-39 | 91 | 91 | 91 | 89 |
| 40-54 | 93 | 92 | 91 | 89 |
| 55 + | 91 | 90 | 90 | 89 |
|  Education (End of) | | | | |
| 15- | 88 | 86 | 86 | 89 |
| 16-19 | 91 | 90 | 90 | 89 |
| 20+ | 94 | 94 | 93 | 90 |
| Still studying | 94 | 94 | 94 | 92 |
|  Socio-professional category | | | | |
| Self-employed | 91 | 91 | 91 | 89 |
| Managers | 94 | 94 | 94 | 90 |
| Other white collars | 92 | 93 | 91 | 89 |
| Manual workers | 91 | 91 | 90 | 89 |
| House persons | 89 | 89 | 88 | 87 |
| Unemployed | 91 | 91 | 90 | 91 |
| Retired | 91 | 90 | 89 | 89 |
| Students | 94 | 94 | 94 | 92 |
|  Difficulties paying bills | | | | |
| Most of the time | 89 | 86 | 87 | 87 |
| From time to time | 90 | 88 | 89 | 89 |
| Almost never/ Never | 93 | 93 | 92 | 90 |

1 Ensuring access to secure energy in the EU

Having a well-connected energy network and reinforcing EU cooperation on energy are the priorities for ensuring secure energy access in the EU

Respondents were then asked how far they agree with a number of statements regarding energy security¹⁰. Nearly nine in ten respondents say they agree it is necessary **to have a well-connected energy network across the EU** to ensure access to secure energy (89%), a majority of whom (53%) say they totally agree while a third say they tend to agree. Just over one in 20 respondents say they disagree with that statement (6%).

Almost nine in ten respondents (88%) also agree it's necessary to **reinforce EU cooperation across borders and solidarity between Member States in the event of energy crises** to ensure access to secure energy, with just under half (48%) saying they totally agree, four in ten saying they tend to agree (40%) and 6% saying they disagree.

To ensure access to secure energy, it is necessary **to have more cooperation on cybersecurity in the field of energy between Member States** is a statement over eight in ten respondents (86%) say they agree with, a relative majority 'totally' agreeing (50%) and over a third (36%) tending to agree. 6% say they disagree with this.

Over eight in ten respondents (85%) say it is necessary **to ensure that nuclear energy is safe and secure** in the EU to ensure access to secure energy, with a majority saying they totally agree (55%), three in ten saying they tend to agree (30%) and just under a tenth saying they disagree (9%).

The same proportion of respondents (85%) say they agree that, to ensure access to secure energy, it is necessary **for the EU to monitor foreign investments in strategic energy infrastructure in the EU**, with just under half saying they totally agree (47%) and just under four in ten (38%) saying they tend to agree. Under a tenth (8%) say they disagree with this.

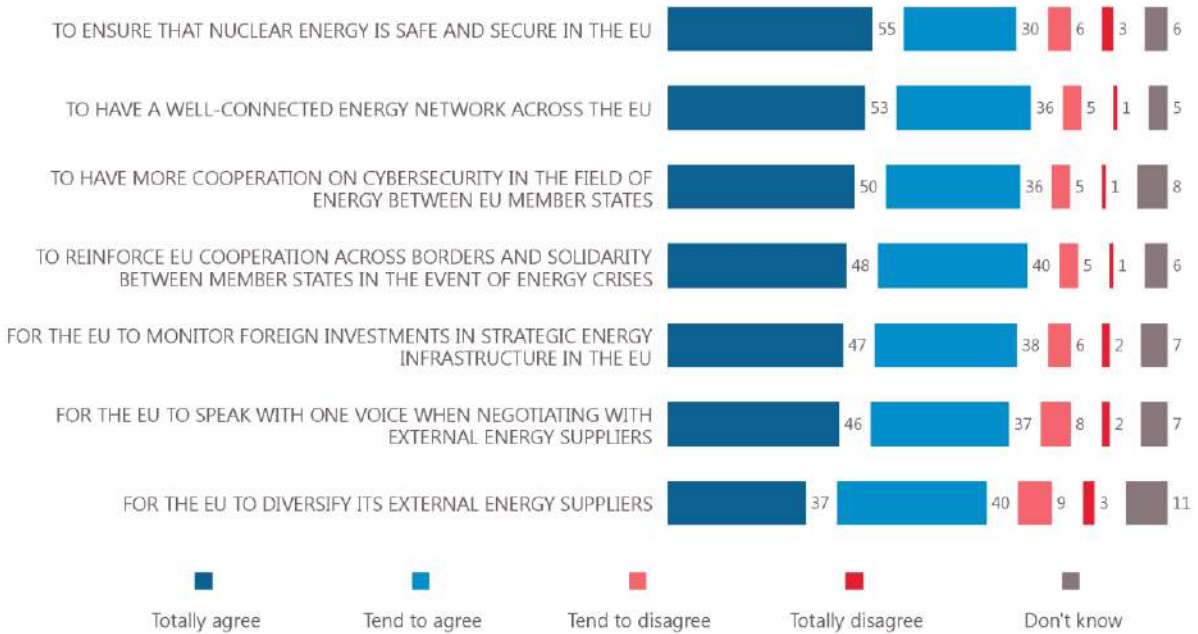
Just over eight in ten respondents (83%) say they agree that, to ensure access to secure energy, it is necessary **for the EU to speak with one voice when negotiating with external energy suppliers**. Over four in ten of those surveyed say they totally agree with this (46%), while just under that proportion say they tend to agree (37%). One in ten respondents say they disagree with the statement (10%).

Three quarters of respondents (77%) agree it is necessary **for the EU to diversify its external energy suppliers** to ensure access to secure energy, with just under four in ten (37%) saying they totally agree and four in ten (40%) saying they tend to agree. Just over a tenth say they disagree with this (12%), while almost the same proportion say they 'don't know' (11%).

In all categories, no more than 7% of respondents say they **don't know**, with the exception of the EU diversifying its external suppliers (11%)

¹⁰To what extent do you agree or disagree with the following statements? In order to ensure access to secure energy, it is necessary... To reinforce EU cooperation across borders and solidarity between Member States in the event of energy crises; For the EU to diversify its external energy suppliers; For the EU to speak with one voice when negotiating with external energy suppliers; To have a well-connected energy network across the EU; To have more cooperation on cybersecurity in the field of energy between EU Member States; To ensure that nuclear energy is safe and secure in the EU; For the EU to monitor foreign investments in strategic energy infrastructure in the EU

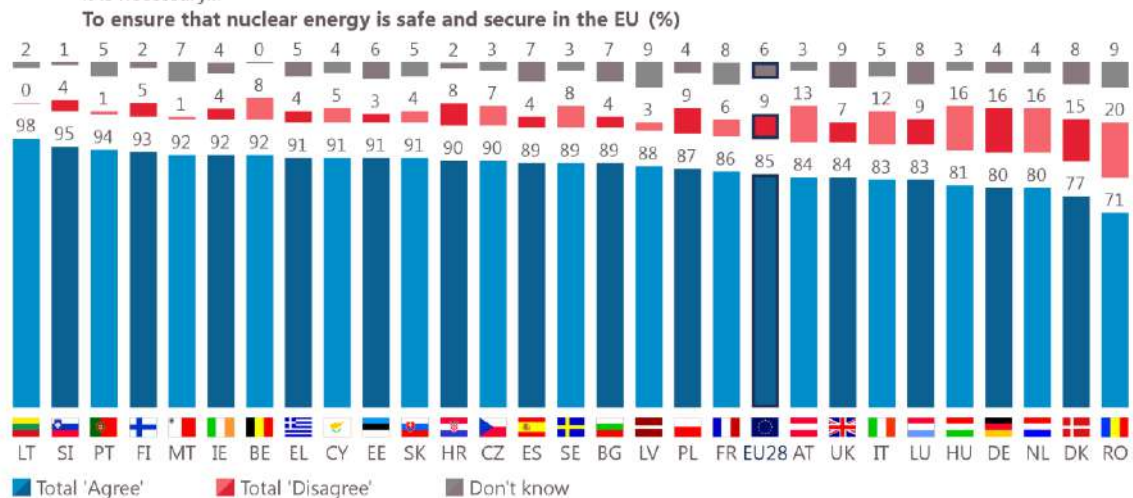
QB3 To what extent do you agree or disagree with the following statements? In order to ensure access to secure energy, it is necessary...
(% - EU)



Base: All respondents (n=27,438)

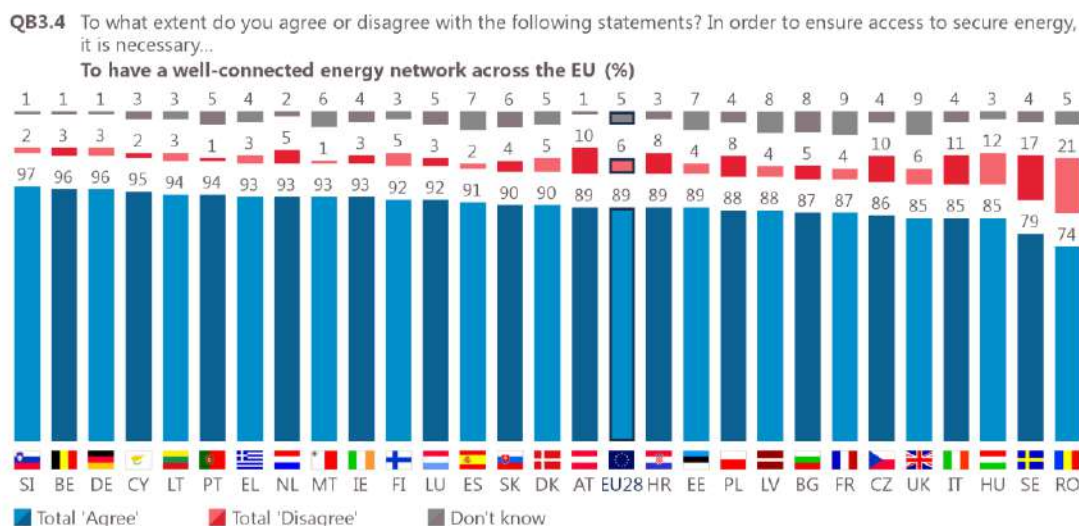
At a country level, there are variations in the results across the EU for each of the statements. Nearly all respondents in Lithuania (98%) and at least nine in ten of those surveyed in 12 other Member States say they agree it's necessary **to ensure that nuclear energy is safe and secure in the EU** to ensure access to secure energy. At the other end of the scale, just over seven in ten of those polled in Romania (71%), three quarters of those in Denmark (77%) and eight in ten respondents in the Netherlands and Germany (both 80%) agree. A fifth of respondents in Romania disagree with the statement (20%), while almost a fifth disagree in the Netherlands, Germany and Hungary (all 16%). In contrast, no respondents in Lithuania disagree, while only 1% in Portugal and Malta share that view.

QB3.6 To what extent do you agree or disagree with the following statements? In order to ensure access to secure energy, it is necessary...



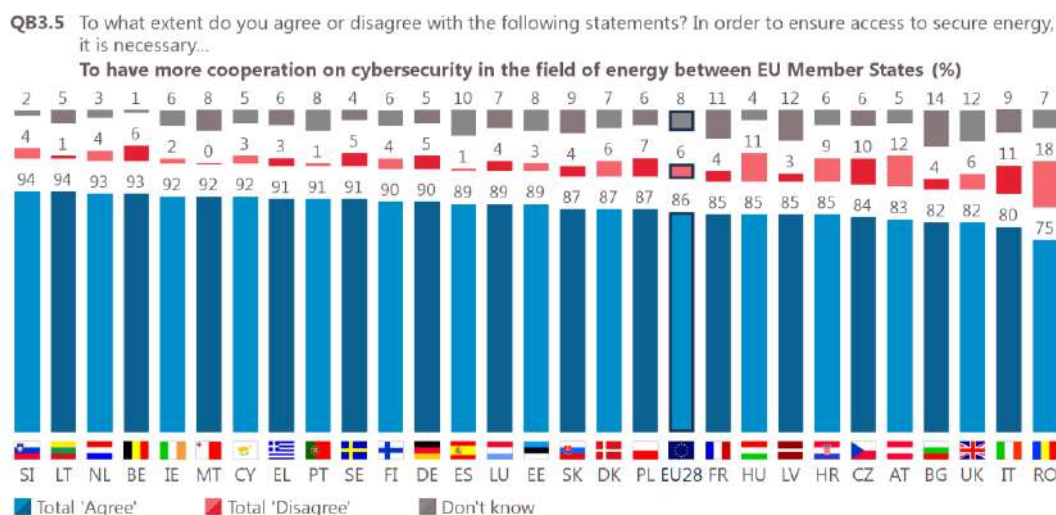
Base: All respondents (n=27,438)

The variations are of a similar degree when it comes to the results for respondents agreeing it is necessary **to have a well-connected energy network across the EU** to ensure access to secure energy. At least nine in ten respondents in 15 EU Member States agree with this, with the highest levels of agreement being in Slovenia (97%), Belgium and Germany (both 96%). Again at the other end of the scale, just under three quarters of those surveyed in Romania agree with the statement (74%), while just over that proportion agree in Sweden (79%). The highest level of disagreement with the statement is in Romania, where a fifth take this view (21%), followed by Sweden (17%) and Hungary (12%), while the lowest levels of disagreement are in Malta and Portugal (both 1%).



Base: All respondents (n=27,438)

As with the other statements, there is a similar variable picture at a national level when it comes to respondents agreeing **more cooperation on cybersecurity in the field of energy between EU Member States** is needed to ensure secure energy. At least nine in ten respondents in 12 countries say they agree with this, with Slovenia, Lithuania (both 94%), the Netherlands and Belgium (both 93%) having the highest proportions of those polled saying this and Romania (75%), Italy (80%), the United Kingdom and Bulgaria (both 82%) having the lowest levels. Romania again has the highest proportion of respondents (18%) who say they disagree with the statement, followed by Austria (12%), Hungary and Italy (both 11%). No respondents in Malta disagree with this statement, while just 1% in Lithuania, Portugal and Spain disagree with it.








Base: All respondents (n=27,438)

Variations and similarities are revealed on examination of the socio-demographic analysis:

- Men are marginally more likely than women to agree with all the statements, most notably **'the EU must diversify its external energy suppliers'** (78% vs 75%).
- Respondents aged 55 and more are the least likely group to agree with any of the statements, with the exception of **'the EU to speak with one voice when negotiating with external energy suppliers'**, which those aged 15-24 are least likely to agree with (81%).
- The longer respondents have stayed in education, the more likely they are to agree with all the statements. Those whose education finished after the age of 20 are the **most likely group** to agree with all of the statements, while those surveyed whose education finished before they were 15 are the **least likely to agree** with them.
- In general, managers are the most likely to agree with the statements, with the exception of one: **'to ensure that nuclear energy is safe and secure in the EU'** (84%); other white collar workers (87%) are the most likely to agree with this.
- The easier respondents find it to pay their bills, the more likely they are to agree with each of the statements. Those surveyed who almost never or never have difficulties paying bills are the **most likely to agree** with all the statements, whereas those who struggle most of the time are the **least likely**. This is particularly true of the statement **'to have more cooperation on cybersecurity in the field of energy among EU Member States'**, where there is a gap of 10 percentage points between those who almost never or never have difficulties (88%) and those you have difficulties most of the time (78%).

QB3 To what extent do you agree or disagree with the following statements? In order to ensure access to secure energy, it is necessary...

Total 'agree' (% - EU)

| | To have more cooperation on cybersecurity in the field of energy between EU Member States | To ensure that nuclear energy is safe and secure in the EU | For the EU to speak with one voice when negotiating with external energy suppliers | For the EU to diversify its external energy suppliers |
|--|---|--|--|---|
| EU28 | 86 | 85 | 83 | 77 |
|  Gender | | | | |
| Man | 87 | 85 | 84 | 78 |
| Woman | 85 | 84 | 83 | 75 |
|  Age | | | | |
| 15-24 | 86 | 86 | 81 | 76 |
| 25-39 | 86 | 85 | 84 | 79 |
| 40-54 | 89 | 85 | 86 | 79 |
| 55 + | 83 | 84 | 82 | 75 |
|  Education (End of) | | | | |
| 15- | 78 | 81 | 78 | 72 |
| 16-19 | 85 | 86 | 84 | 78 |
| 20+ | 90 | 86 | 87 | 79 |
| Still studying | 89 | 86 | 79 | 76 |
|  Socio-professional category | | | | |
| Self-employed | 87 | 86 | 85 | 81 |
| Managers | 90 | 84 | 87 | 80 |
| Other white collars | 89 | 87 | 85 | 80 |
| Manual workers | 86 | 84 | 85 | 78 |
| House persons | 83 | 81 | 82 | 76 |
| Unemployed | 83 | 86 | 82 | 74 |
| Retired | 83 | 83 | 81 | 74 |
| Students | 89 | 86 | 79 | 76 |
|  Difficulties paying bills | | | | |
| Most of the time | 78 | 83 | 78 | 73 |
| From time to time | 84 | 84 | 82 | 77 |
| Almost never/ Never | 88 | 85 | 85 | 77 |

2 Ensuring access to clean energy in the EU

Nine in ten respondents agree the EU should encourage investment in research and innovation to ensure access to clean energy

Respondents were asked how far they agree with a range of statements concerning access to clean energy¹¹. The statement the highest proportion of respondents agree with is that it is the EU's responsibility to 'encourage **more investment in energy research and innovation**' to ensure access to clean energy. Nine in ten respondents (92%) agree with this, with nearly six in ten saying they totally agree (58%) and a third saying they tend to agree (34%). Under one in 20 respondents say they tend to disagree (4%) with this, while just 1% say they totally disagree.

Nine in ten of those surveyed (90%) say they agree the EU should 'encourage **more investment in renewable energy, e.g. wind, solar**' to secure access to clean energy. Six in ten (60%) totally agree with this and three in ten (30%) tend to agree. Only one in 20 say they tend to disagree with it (5%), while only 2% say they totally disagree.

That the EU should '**empower cities and local communities to move towards clean energy**' to secure access to it is agreed with by nearly nine in ten respondents (89%). A majority say they totally agree (56%), while a third say they tend to agree (33%). Over one in 20 say they tend to disagree (6%) and just 2% say they totally disagree.

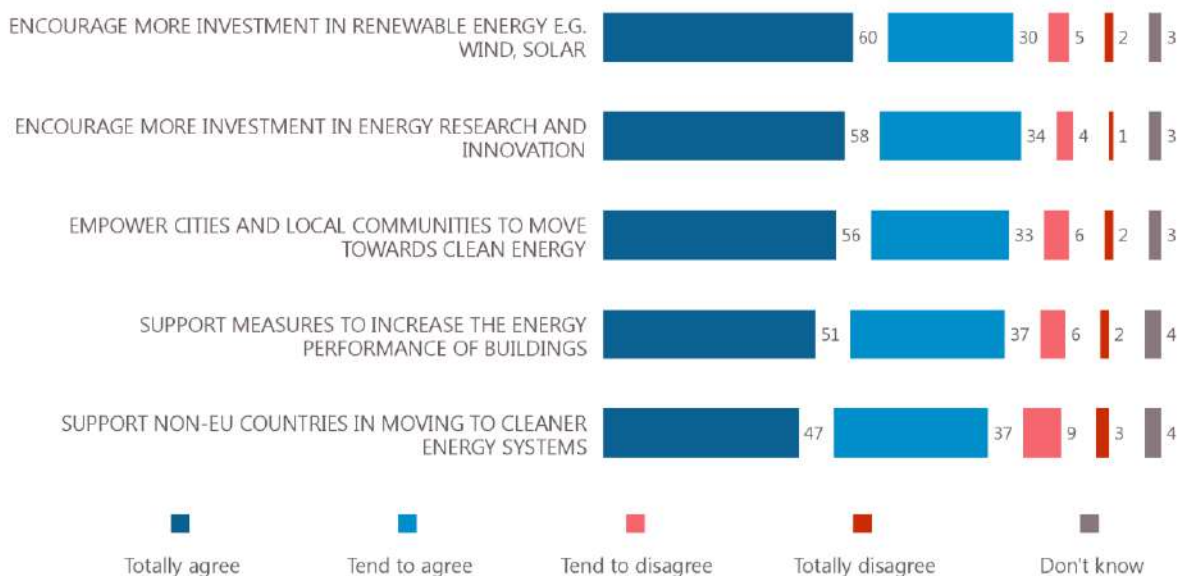
Nearly nine in ten respondents agree with the statement the EU should '**support measures to increase the energy performance of buildings**' to secure clean energy access (88%). A slight majority (51%) say they totally agree while over a third say they tend to agree (37%). Over one in 20 say they tend to disagree (6%) and only 2% say they totally disagree.

Finally, that the EU should '**support non-EU countries in moving to cleaner energy systems**' to secure access to clean energy is the least popular statement, though over eight in ten respondents say they agree with it (84%). Nearly half of respondents totally agree (47%), while over a third say they tend to agree (37%), under a tenth say they tend to disagree (9%) and just 3% say they totally disagree.

In all the categories, no more than 4% of the respondents say they **don't know**.

¹¹To what extent do you agree or disagree with the following statements? It should be the EU's responsibility to... Support measures to increase the energy performance of buildings; Encourage more investment in renewable energy e.g. wind, solar; Encourage more investment in energy research and innovation; Empower cities and local communities to move towards clean energy; Support non-EU countries in moving to cleaner energy systems.

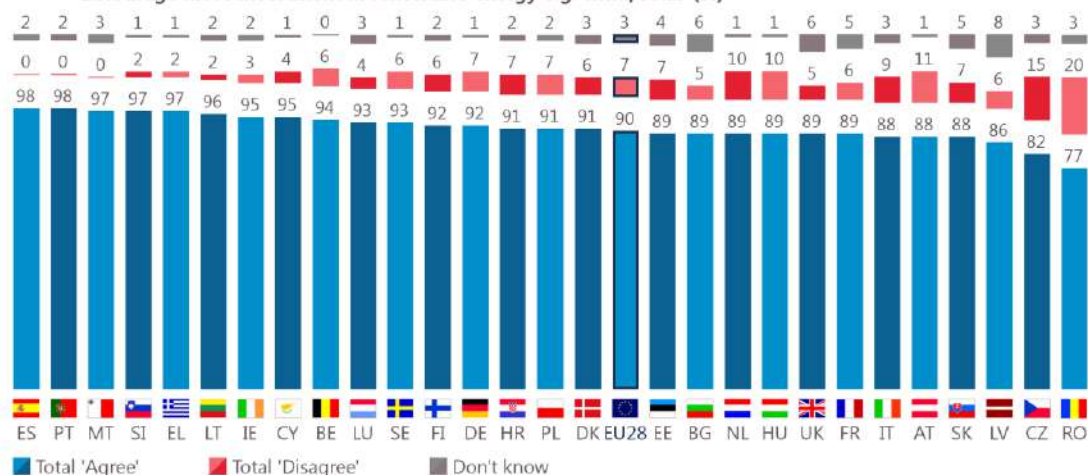
QB4 To what extent do you agree or disagree with the following statements? It should be the EU's responsibility to ... (% - EU)



Base: All respondents (n=27,438)

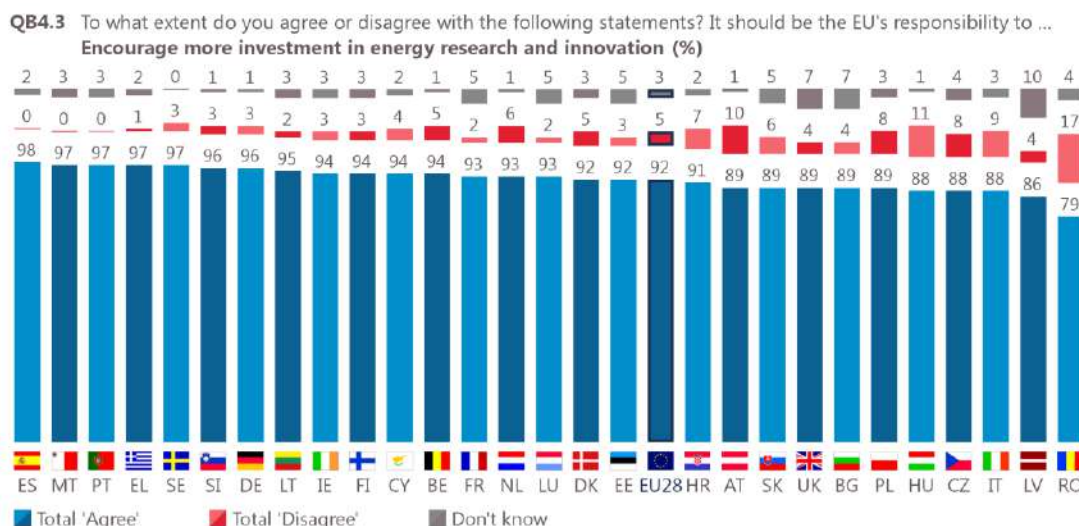
At a national level, there are some significant variations in the results for this question. Almost all those surveyed in Portugal and Spain (both 98%) agree the EU should **‘encourage more investment in renewable energy, e.g. wind, solar’** and nearly the same proportion in Greece, Malta and Slovenia (all 97%) share this view. In contrast, just over three quarters of respondents in Romania (77%) agree with it, followed by just over eight in ten of those surveyed in Czechia (82%). The highest level of disagreement is in Romania, where a fifth of the respondents take this position (20%), while over a tenth of those in Czechia (15%) and Austria (11%) also disagree. At the other end of the scale, no respondents in Spain, Portugal or Malta disagree.

QB4.2 To what extent do you agree or disagree with the following statements? It should be the EU's responsibility to ... Encourage more investment in renewable energy e.g. wind, solar (%)



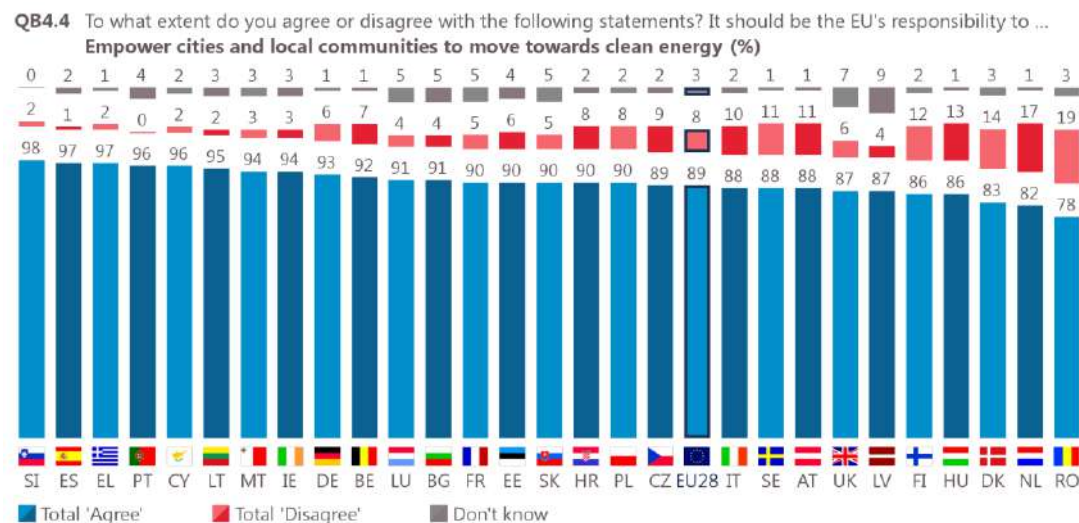
Base: All respondents (n=27,438)

The picture is very similar when it comes to the country-level results for the statement the EU should **'encourage more investment in energy research and innovation'** to secure clean energy access. At the upper end of the scale, almost all the respondents in Spain (98%), Greece, Malta, Portugal and Sweden (97%) say they agree, while at the lower end of the scale, under eight in ten of those surveyed in Romania (79%) and less than nine in ten in Latvia (86%) agree. Disagreement is strongest again in Romania, where nearly a fifth (17%) of respondents say they disagree, while a tenth of those in Austria (10%) and Hungary (11%) say the same. There is no disagreement among respondents in Spain, Malta and Portugal.



Base: All respondents (n=27,438)

At a national level, the variations in agreement with the statement it is the EU's responsibility to **'empower cities and local communities to move towards clean energy'** to secure clean energy access follow a very similar pattern to the results for the other statements. Again, a very high proportion of respondents in Slovenia (98%), Spain and Greece (both 97%) say they agree with this statement, while only around eight in ten of those surveyed in Romania (78%), the Netherlands (82%) and Denmark (83%) say they agree. Again, the highest levels of disagreement with it are in Romania, where a fifth (19%) of respondent take this view, followed by nearly a fifth in the Netherlands (17%) and over a tenth in Denmark (14%). Portugal again records no disagreement among respondents there, while there are very low levels of disagreement in Spain (1%), Cyprus, Greece, Slovenia and Lithuania (all 2%).








Base: All respondents (n=27,438)

The socio-demographic analysis looks at the results for those who agree with each statement and reveals the following variations and similarities, which follow a similar pattern to the results for previous questions:

- There are few differences between women and men.
- Age does not appear to have any bearing on respondents' likelihood to agree with any of the statements.
- Education seems to have a slight influence on respondents' likelihood to agree with the statements, with those who are still studying or have spent longer in education the most likely to agree and those whose education finished before they were 15 least likely to agree. This is particularly true when it comes to the statement '**encourage more investment in energy research and innovation**', which only 86% of the less educated group agree with as opposed to over nine in ten of those still studying or whose education finished after the age of 20 (both 94%).
- Retired respondents are the least likely to agree with any of the statements.
- Though there is not much difference, those who have difficulties paying their bills most of the time are the least likely to agree with all the statements, while those who almost never or never have difficulties are the most likely to agree with them.
- Respondents who say the EU is responsible for the label are the most likely to agree with the statements, though the variations in results are not significant.
- The respondents who are influenced to save money and be more environmentally-friendly by the energy efficiency label are generally the most likely to agree with the statements. The exception is '**support non-EU countries in moving to cleaner energy systems**'.

QB4 To what extent do you agree or disagree with the following statements? It should be the EU's responsibility to ...

Total 'agree' (% - EU)

| | Encourage more investment in energy research and innovation | Support non-EU countries in moving to cleaner energy systems |
|--|---|--|
| EU28 | 92 | 84 |
|  Gender | | |
| Man | 93 | 83 |
| Woman | 91 | 84 |
|  Age | | |
| 15-24 | 92 | 84 |
| 25-39 | 93 | 84 |
| 40-54 | 92 | 84 |
| 55 + | 91 | 83 |
|  Education (End of) | | |
| 15- | 86 | 80 |
| 16-19 | 92 | 84 |
| 20+ | 94 | 86 |
| Still studying | 94 | 86 |
|  Socio-professional category | | |
| Self-employed | 92 | 83 |
| Managers | 96 | 85 |
| Other white collars | 91 | 83 |
| Manual workers | 91 | 84 |
| House persons | 91 | 83 |
| Unemployed | 92 | 84 |
| Retired | 90 | 82 |
| Students | 94 | 86 |
|  Difficulties paying bills | | |
| Most of the time | 88 | 80 |
| From time to time | 89 | 83 |
| Almost never/ Never | 93 | 84 |
| Who is responsible for the label | | |
| The (NATIONALITY) government | 90 | 82 |
| The EU | 94 | 86 |
| The industry, private businesses | 88 | 82 |
| Consumer organisations | 91 | 82 |
| Influence on the choice of purchase | | |
| Yes, save money | 94 | 86 |
| Yes, select more environmentally friendly appliances | 91 | 86 |
| Yes, both | 96 | 85 |
| No | 89 | 80 |

3 Ensuring financially affordable energy

To ensure financially affordable energy, the highest priority is that the EU addresses energy poverty and ensures a fair energy transition so no citizen or region is left behind

Respondents were asked how far they agree with four statements about access to affordable energy in the EU¹². The statement the highest proportion of respondents agrees with is that it should be the EU's responsibility to **'address energy poverty and ensure a fair energy transition so that no citizen or region is left behind'**. Nine in ten respondents agree (90%) with a majority (56%) saying they totally agree and a third (34%) saying they tend to agree. Only one respondent in 20 say they tend to disagree (5%) and just 1% say they totally disagree.

Almost nine in ten respondents (88%) agree the EU should **'ensure that increased competition in EU energy markets translates into more competitive and affordable prices for consumers'**. A slight majority (52%) say they totally agree and over a third say they tend to agree (36%), while over one in 20 say they tend to disagree (6%) and only 2% say they totally disagree.

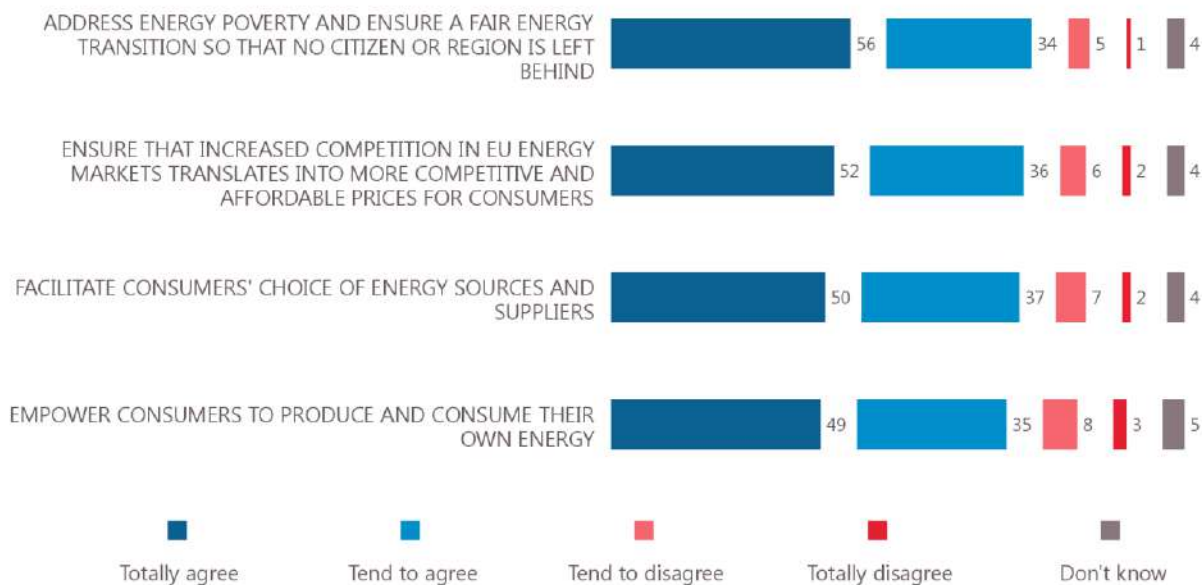
The third highest level of agreement was for the statement that it should be the EU's responsibility to **'facilitate consumers' choice of energy sources and suppliers'**, which nearly nine in ten respondents say they agree with (87%). Half of respondents (50%) say they totally agree and nearly four in ten (37%) say they tend to agree, while just over one in 20 say they tend to disagree (7%) and only 2% say they totally disagree.

Finally, the lowest level of agreement is with the statement the EU should **'empower consumers to produce and consume their own energy'**, though it is still a high proportion – over eight in ten respondents (84%) – who hold this position. Just under half of respondents say they totally agree with it (49%) while over a third say they tend to agree (35%). Over a tenth say they disagree with the statement (11%), with nearly a tenth saying they tend to disagree (8%) and under one in 20 saying they totally disagree (3%).

In all the categories, no more than 5% of the respondents say they **don't know**.

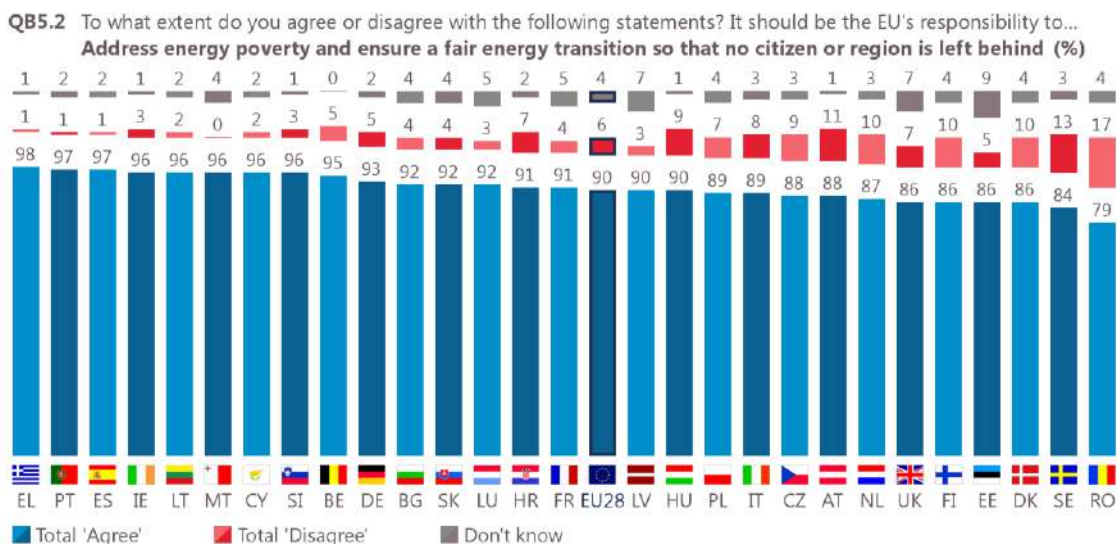
¹²To what extent do you agree or disagree with the following statements? It should be the EU's responsibility to... Ensure that increased competition in EU energy markets translates into more competitive and affordable prices for consumers; Address energy poverty and ensure a fair energy transition so that no citizen or region is left behind; Facilitate consumers' choice of energy sources and suppliers; Empower consumers to produce and consume their own energy.

QB5 To what extent do you agree or disagree with the following statements? It should be the EU's responsibility to... (% - EU)



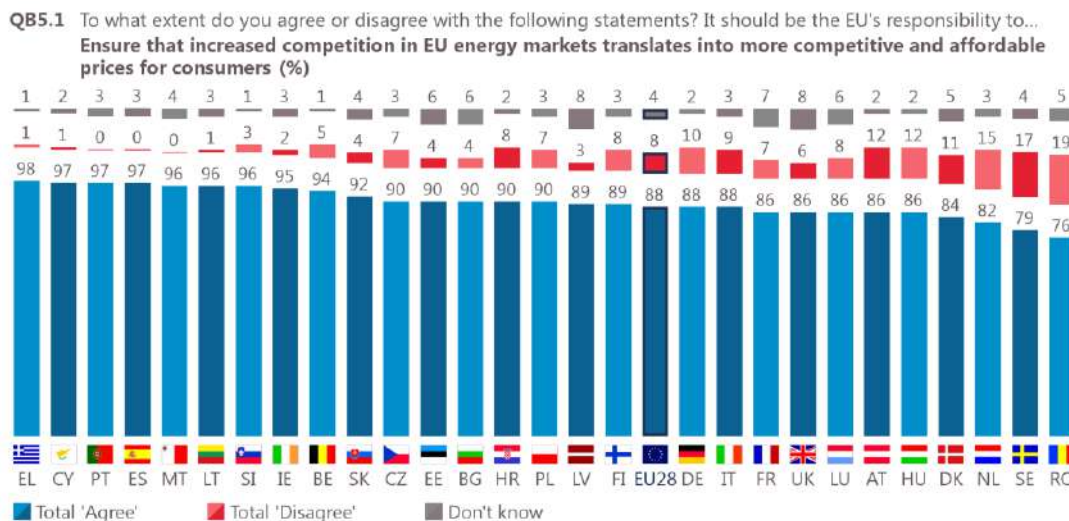
Base: All respondents (n=27,438)

Again, there are national-level variations that appear to follow a similar pattern to those of previous questions. In 17 of the EU's 28 Member States, at least nine in ten respondents agree it is the EU's responsibility to **address energy poverty and ensure a fair energy transition so that no citizen or region is left behind**. This feeling is held most strongly in Greece (98%), Portugal and Spain (both 97%) and least strongly in Romania (79%) and Sweden (84%). Nearly a fifth of respondents in Romania (17%) disagree with the statement, while at least a tenth disagree with it in five other countries: Sweden (13%), Austria (11%), Denmark, Finland and the Netherlands (all 10%). In contrast, there are no respondents in Malta who disagree with it and only 1% of respondents disagree in Greece, Portugal and Spain.



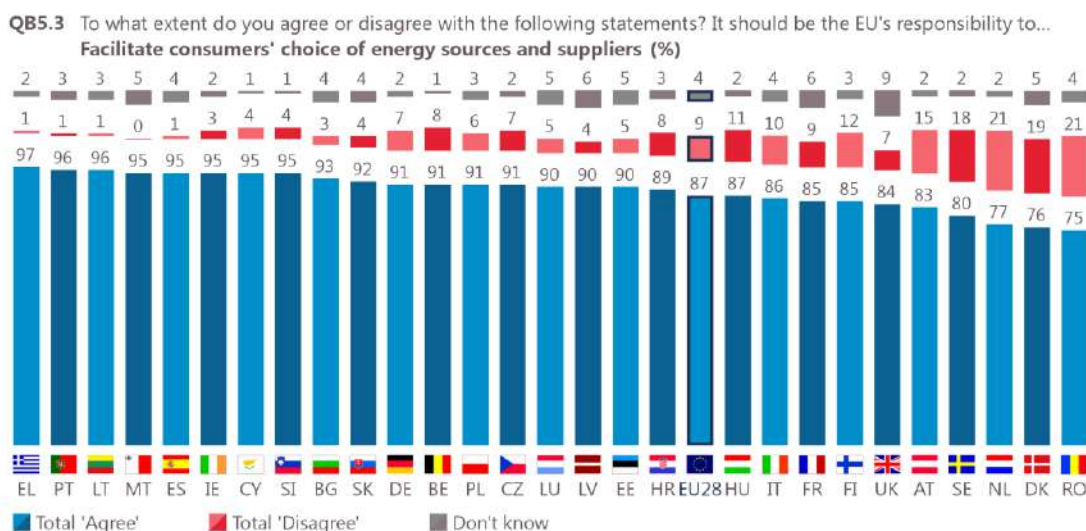
Base: All respondents (n=27,438)

It is a similar picture in terms of the country-level results for those agreeing with the statement the EU should **ensure that increased competition in EU energy markets translates into more competitive and affordable prices for consumers**. The highest levels of agreement with this are found in Greece (98%), Cyprus, Portugal and Spain (all 97%), while the lowest levels are in Romania (76%), Sweden (79%) and the Netherlands (82%). Nearly a fifth of respondents in Romania (19%) and Sweden (17%) disagree with the statement, while at least a tenth holds this position in Germany (10%), Denmark (11%), Austria, Hungary (both 12%) and the Netherlands (15%). At the other end of the scale, no respondents in Malta, Portugal or Spain say they disagree with it.



Base: All respondents (n=27,438)

A similar pattern emerges in results for the statement that it is the EU's responsibility to **facilitate consumers' choice of energy sources and suppliers**. Again, at the upper end of the scale for the proportion of respondents who agree with this are Greece (97%), Portugal and Lithuania (both 96%), while at the lower end of the scale are Romania (75%), Denmark (76%) and the Netherlands (77%). Over a fifth of respondents in Romania and the Netherlands (both 21%) disagree with the statement, as do nearly a fifth in Denmark (19%) and Sweden (18%). Malta again has no respondents who disagree with it and there are extremely low levels of disagreement in Greece, Lithuania, Portugal and Spain (all 1%).







Base: All respondents (n=27,438)

Once again, the socio-demographic analysis focuses on the results for respondents who agree with each of the statements. It reveals:

- Again, there are not many differences in the results for men and women for each of the statements on affordable energy.
- Age does not appear to be a determining factor in the results, with the exception being for the statement '**empower consumers to produce and consume their own energy**'. Those aged 40-54 are the most likely to agree with this (87%), while those aged 55 and more are the least likely (82%).
- Education is not much of a determining factor with results being broadly similar. The largest gap is for agreement with the statement the EU should '**address energy poverty and ensure a fair energy transition so that no citizen or region is left behind**' – those still studying (93%) are the most likely to agree with this, while those whose education finished before they were 15 are the least likely (88%).
- Those respondents who identify as being upper class are by far the least likely to agree with the statement the EU should '**empower consumers to produce and consume their own energy**' – only seven in ten of them agree (71%), while the next lowest proportion who agree is upper middle class respondents (83%).

QB5 To what extent do you agree or disagree with the following statements? It should be the EU's responsibility to...

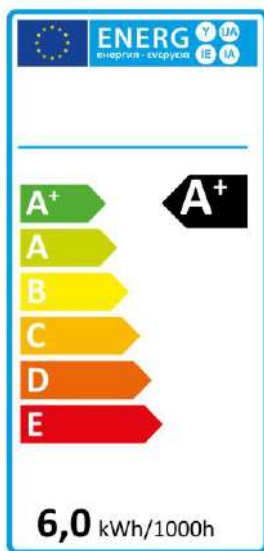
Total 'agree' (% - EU)

| | Address energy poverty and ensure a fair energy transition so that no citizen or region is left behind | Empower consumers to produce and consume their own energy |
|--|--|---|
| EU28 | 90 | 84 |
|  Gender | | |
| Man | 90 | 84 |
| Woman | 91 | 84 |
|  Age | | |
| 15-24 | 91 | 84 |
| 25-39 | 91 | 86 |
| 40-54 | 91 | 87 |
| 55 + | 89 | 82 |
|  Education (End of) | | |
| 15- | 88 | 82 |
| 16-19 | 91 | 86 |
| 20+ | 91 | 85 |
| Still studying | 93 | 84 |
|  Consider belonging to | | |
| The working class | 90 | 86 |
| The lower middle class | 91 | 84 |
| The middle class | 91 | 85 |
| The upper middle class | 88 | 83 |
| The upper class | 88 | 71 |
| Recognised the label | | |
| Total 'yes' | 91 | 86 |
| Yes, and knows what it stands for | 92 | 86 |
| Yes, and does not know what it stands for | 86 | 80 |
| No | 82 | 74 |

III. KNOWLEDGE AND IMPACT OF THE ENERGY LABELLING

A high majority of respondents say they recognise energy labelling and know what it stands for

Respondents were asked whether they recognised or not the following energy label¹³.

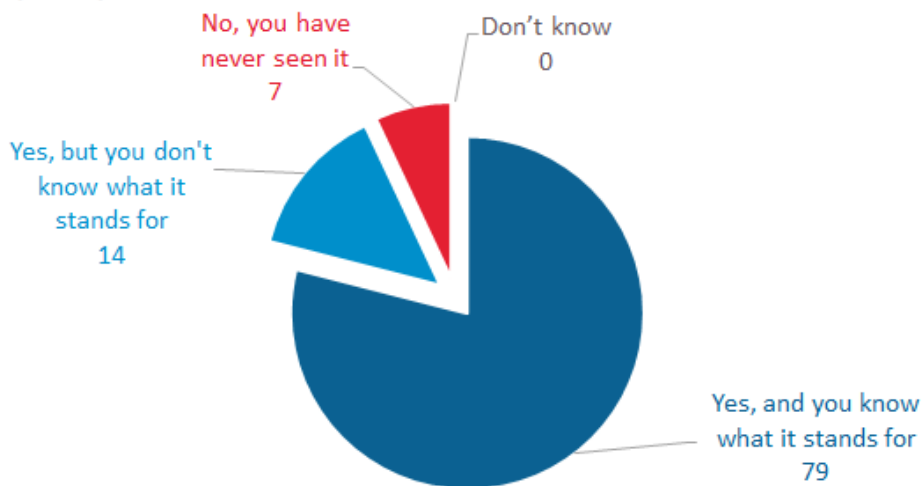


EU Energy label¹⁴

Nearly eight in ten respondents say they **recognise the label and know what it stands for** (79%), while over a tenth of those polled say they recognise the label but do not know what it stands for (14%). In contrast, only just over one in 20 of those surveyed say they **have never seen the label** (7%).

No respondents say they **don't know** if they recognise the label.

QB6 Do you recognise the following label?
(% - EU)



¹³ Do you recognise the following label? Yes, and you know what it stands for; Yes, but you don't know what it stands for; No, you have never seen it; DK.

¹⁴ Provided by DG ENER, the same label was shown to all the respondents.

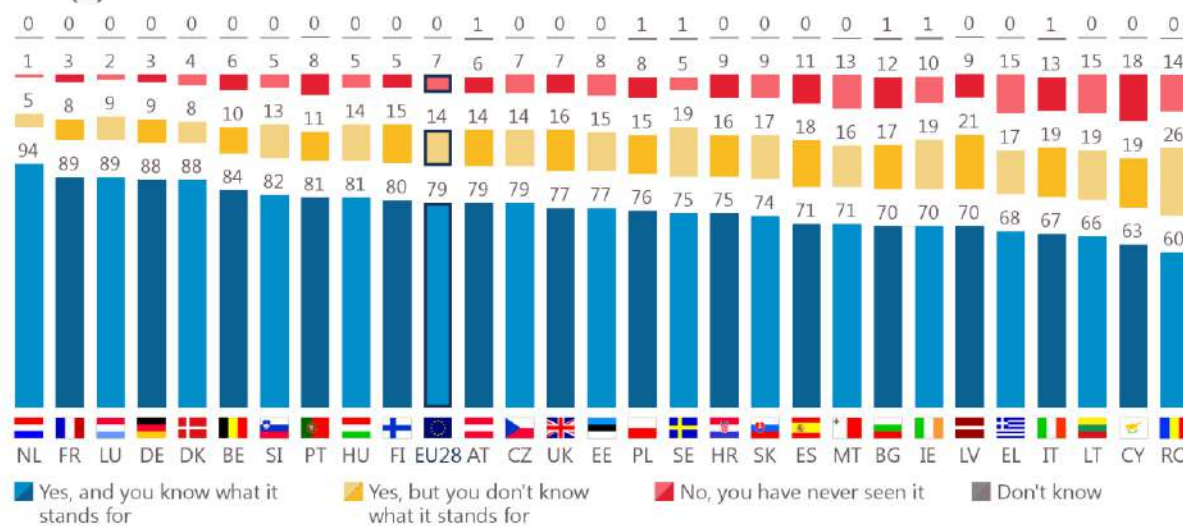
Base: All respondents (n=27,438)

At a country level, there are some relatively significant variations in the results for this question. A majority of respondents in all 28 EU Member States say they **recognise the label and know what it stands for**. Awareness is highest in the Netherlands, where over nine in ten respondents (94%) say they recognise it and know what it stands for, followed by France and Luxembourg (both 89%). But awareness is relatively low in Romania, where just six in ten respondents (60%) say they recognise it and know what it stands for, while no more than two thirds of respondents say this in Lithuania (66%) and Cyprus (63%). To put this result into context, 16 of the EU's 28 countries record results below the **EU average of 79%**.

A quarter of respondents in Romania (26%) say they recognise the label but **do not know what it stands for**, while around a fifth say the same in six other countries: Latvia (21%), Cyprus, Ireland, Italy, Lithuania and Sweden (all 19%). Under a tenth of respondents in five countries also hold this position: Germany, Luxembourg (both 9%), Denmark, France (both 8%) and the Netherlands (5%).

Almost a fifth of respondents in Cyprus (18%) say they **do not recognise the label**, while at least a tenth say the same in eight other countries, most notably in Greece, Lithuania (both 15%) and Romania (14%). At the other end of the scale, there are very low levels of lack of awareness in the Netherlands (1%), Luxembourg (2%), France and Germany (both 3%).

QB6 Do you recognise the following label? (%)








Base: All respondents (n=27,438)

The socio-demographic analysis for this question reveals some interesting similarities and variations, including:

- Men are slightly **more likely than women** to recognise the label (94% vs 92%) and more likely to say they recognise it and know what it stands for (82% vs 75%).
- Respondents aged 25-39 are the most likely to **recognise the label** (97%), though those surveyed aged 40-54 are the most likely to say they recognise it and **know what it stands for** (86%). Respondents aged 15-24 are least likely to say they recognise it and know what it stands for (70%), though those aged over 55 are the **least likely** to say they recognise it overall (88%).
- Education appears to be a **strong determining factor** in the responses to this question. Respondents whose education finished after the age of 20 are the most likely to recognise the label (97%) and the most likely to know what it stands for as well (88%). Those polled whose education finished before they were 15 are the least likely to recognise it (81%) and least likely to know what it means (63%).
- Respondents' profession does not appear to have too much of a bearing on responses, though **nearly all managers** (98%) say they recognise the label and over nine in ten say they know what it means as well (92%). Under nine in ten of those who are retired say they recognise the label (86%) and **only seven in ten** retired respondents, students and house persons say they know what it stands for (all 70%).
- The respondents who **almost never or never** have difficulties paying bills are marginally **the most likely** to recognise the label (94%), but are **much more likely** than their counterparts who sometimes (72%) or frequently struggle to pay bills (70%) to know what it stands for as well (82%).
- Respondents who say they are influenced by the label to save money when buying electrical goods are the **most likely to recognise the label and know what it stands for** (94%), while those who are **not influenced by the label** in their electronic goods purchasing decisions are the least likely (61%).

QB6 Do you recognise the following label?
(% - EU)

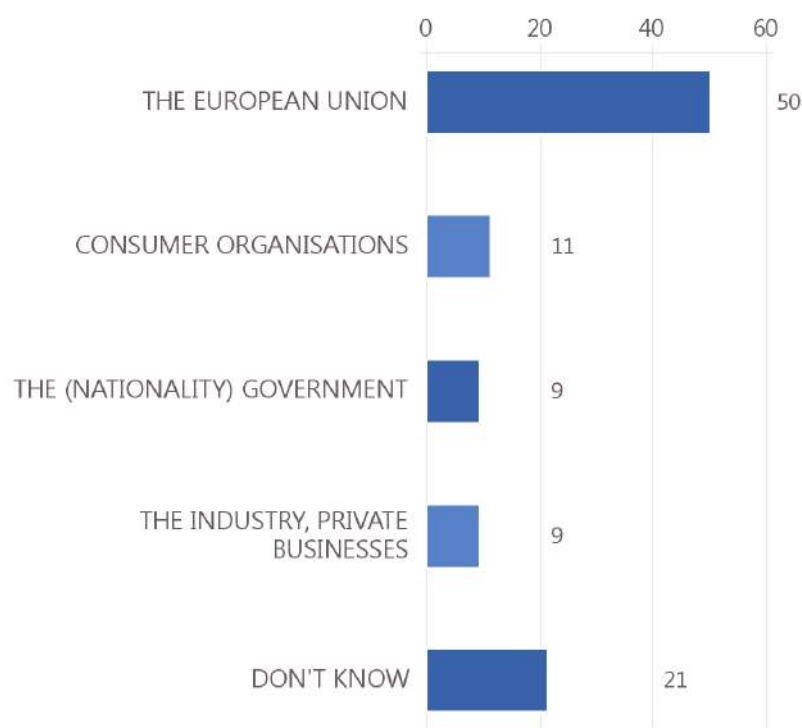
| | Yes, and you know what it stands for | Yes, but you don't know what it stands for | No, you have never seen it | Don't know | Total 'Recognises this label' |
|--|--------------------------------------|--|----------------------------|------------|-------------------------------|
| EU28 | 79 | 14 | 7 | 0 | 93 |
|  Gender | | | | | |
| Man | 82 | 12 | 6 | 0 | 94 |
| Woman | 75 | 17 | 8 | 0 | 92 |
|  Age | | | | | |
| 15-24 | 70 | 23 | 7 | 0 | 93 |
| 25-39 | 85 | 12 | 3 | 0 | 97 |
| 40-54 | 86 | 10 | 4 | 0 | 96 |
| 55 + | 72 | 16 | 12 | 0 | 88 |
|  Education (End of) | | | | | |
| 15- | 63 | 18 | 19 | 0 | 81 |
| 16-19 | 79 | 15 | 6 | 0 | 94 |
| 20+ | 88 | 9 | 3 | 0 | 97 |
| Still studying | 70 | 23 | 7 | 0 | 93 |
|  Socio-professional category | | | | | |
| Self-employed | 87 | 9 | 4 | 0 | 96 |
| Managers | 92 | 6 | 2 | 0 | 98 |
| Other white collars | 84 | 13 | 3 | 0 | 97 |
| Manual workers | 82 | 13 | 5 | 0 | 95 |
| House persons | 70 | 19 | 11 | 0 | 89 |
| Unemployed | 76 | 16 | 8 | 0 | 92 |
| Retired | 70 | 16 | 13 | 1 | 86 |
| Students | 70 | 23 | 7 | 0 | 93 |
|  Difficulties paying bills | | | | | |
| Most of the time | 70 | 17 | 13 | 0 | 87 |
| From time to time | 72 | 19 | 9 | 0 | 91 |
| Almost never/ Never | 82 | 12 | 6 | 0 | 94 |
| Influence on the choice of purchase | | | | | |
| Yes, save money | 94 | 6 | 0 | 0 | 100 |
| Yes, select more environmentally-friendly appliances | 86 | 14 | 0 | 0 | 100 |
| Yes, both | 92 | 8 | 0 | 0 | 100 |
| No | 61 | 39 | 0 | 0 | 100 |

Half of respondents say the EU is responsible for energy labelling

Respondents were asked if they know who is responsible for energy labelling¹⁵. Half of the respondents (50%) say the **European Union is responsible** for the label, which is by far the most-given answer.

The next most-given answer is '**don't know**': over a fifth of respondents (21%) say this when asked who is responsible for the label. Just over a tenth of respondents say **consumer organisations** are responsible for it (11%), while just under a tenth say it is the responsibility of the **national government** (9%) or the **industry or private businesses** (9%).

QB7 Do you know who is responsible for this label?
(% - EU)



Base: All respondents (n=27,438)

¹⁵ Do you know who is responsible for this label? The (NATIONALITY) government; The European Union; The industry, private businesses; Consumer organisations; DK

At a national level, the **European Union** is the most-mentioned response in all but one of the EU Member States – Estonia – where it is the second most-given answer (28%). The highest incidences of respondents giving this answer are in Cyprus (71%), Belgium (67%) and Luxembourg (65%), while at least four in ten respondents say this in all the other nations where this is the top answer.

Over a third of respondents in Estonia (35%) say they think the **industry or private businesses** are responsible for the label, the most-given answer in that country. It is the second most given response in 14 other countries and the third most frequent answer in seven more.

Consumer organisations is the second most-popular answer in 11 countries, most notably Hungary (24%), France, Germany and Sweden (all 17%), while it is the third most given answer in ten EU Member States.

Finally, the second most-given answer in five EU Member States is the **national government**, most notably in the Netherlands (17%) and the United Kingdom (16%), while it is the third-highest ranked answer in 12 other countries.

QB7 Do you know who is responsible for this label? (%)




| | | The European Union | Consumer organisations | The (NATIONALITY) government | The industry, private businesses |
|------|--|------------------------------------|------------------------|------------------------------|----------------------------------|
| EU28 | | 50 | 11 | 9 | 9 |
| BE | | 67 | 11 | 9 | 6 |
| BG | | 49 | 6 | 4 | 9 |
| CZ | | 47 | 11 | 12 | 16 |
| DK | | 50 | 16 | 6 | 4 |
| DE | | 44 | 17 | 10 | 11 |
| EE | | 28 | 8 | 2 | 35 |
| IE | | 59 | 7 | 10 | 8 |
| EL | | 59 | 2 | 4 | 13 |
| ES | | 56 | 3 | 7 | 5 |
| FR | | 45 | 17 | 10 | 4 |
| HR | | 59 | 7 | 7 | 13 |
| IT | | 58 | 6 | 7 | 11 |
| CY | | 71 | 1 | 2 | 7 |
| LV | | 52 | 8 | 2 | 10 |
| LT | | 45 | 7 | 6 | 21 |
| LU | | 65 | 8 | 7 | 3 |
| HU | | 41 | 24 | 10 | 11 |
| MT | | 49 | 9 | 7 | 14 |
| NL | | 41 | 15 | 17 | 7 |
| AT | | 45 | 15 | 15 | 10 |
| PL | | 50 | 10 | 8 | 10 |
| PT | | 51 | 4 | 4 | 6 |
| RO | | 47 | 11 | 8 | 14 |
| SI | | 52 | 15 | 6 | 13 |
| SK | | 44 | 13 | 11 | 18 |
| FI | | 57 | 12 | 3 | 12 |
| SE | | 48 | 17 | 3 | 6 |
| UK | | 48 | 6 | 16 | 4 |
| | | 1st MOST FREQUENTLY MENTIONED ITEM | | | |
| | | 2nd MOST FREQUENTLY MENTIONED ITEM | | | |
| | | 3rd MOST FREQUENTLY MENTIONED ITEM | | | |

Base: All respondents (n=27,438)

Looking at the socio-demographic analysis, some significant variations and similarities are revealed in the results:

- **Men are more likely** to say the label is the responsibility of the European Union (54%) than women (46%).
- A majority of respondents in all age groups except those aged 55 or more (42%) say the label is the EU's responsibility. Those surveyed **aged 55 and more are also most likely to say they don't know** who is responsible (27%).
- Education appears to be a factor in responses, with those surveyed whose education finished **after the age of 20 most likely** to say the label is the **EU's responsibility** (56%) and those whose education finished **before they were 15 the least likely** (36%). The least educated group is **nearly twice as likely** as the group that has spent the longest time in education to say they don't know who is responsible (34% vs 18%).
- Respondents whose electrical goods purchasing decisions **are not influenced by the label** are the least likely to say it is the responsibility of the EU (40%) and the **most likely to say they do not know** who is responsible for it (30%).

QB7 Do you know who is responsible for this label?
(% - EU)

| | The European Union | Consumer organisations | The (NATIONALITY) government | The industry, private businesses | Don't know |
|---|--------------------|------------------------|------------------------------|----------------------------------|------------|
| EU28 | 50 | 11 | 9 | 9 | 21 |
|  Gender | | | | | |
| Man | 54 | 10 | 9 | 9 | 18 |
| Woman | 46 | 12 | 9 | 8 | 25 |
|  Age | | | | | |
| 15-24 | 52 | 9 | 8 | 8 | 23 |
| 25-39 | 56 | 10 | 9 | 8 | 17 |
| 40-54 | 55 | 11 | 8 | 9 | 17 |
| 55 + | 42 | 12 | 11 | 8 | 27 |
|  Education (End of) | | | | | |
| 15- | 36 | 10 | 11 | 9 | 34 |
| 16-19 | 49 | 12 | 10 | 10 | 19 |
| 20+ | 56 | 11 | 8 | 7 | 18 |
| Still studying | 54 | 9 | 7 | 8 | 22 |
| Influence on the choice of purchase | | | | | |
| Yes, save money | 53 | 12 | 10 | 9 | 16 |
| Yes, select more environmentally-friendly appliances | 57 | 11 | 10 | 10 | 12 |
| Yes, both | 56 | 13 | 8 | 8 | 15 |
| No | 40 | 10 | 11 | 9 | 30 |

Nearly eight in ten respondents say they have been influenced by the EU energy label

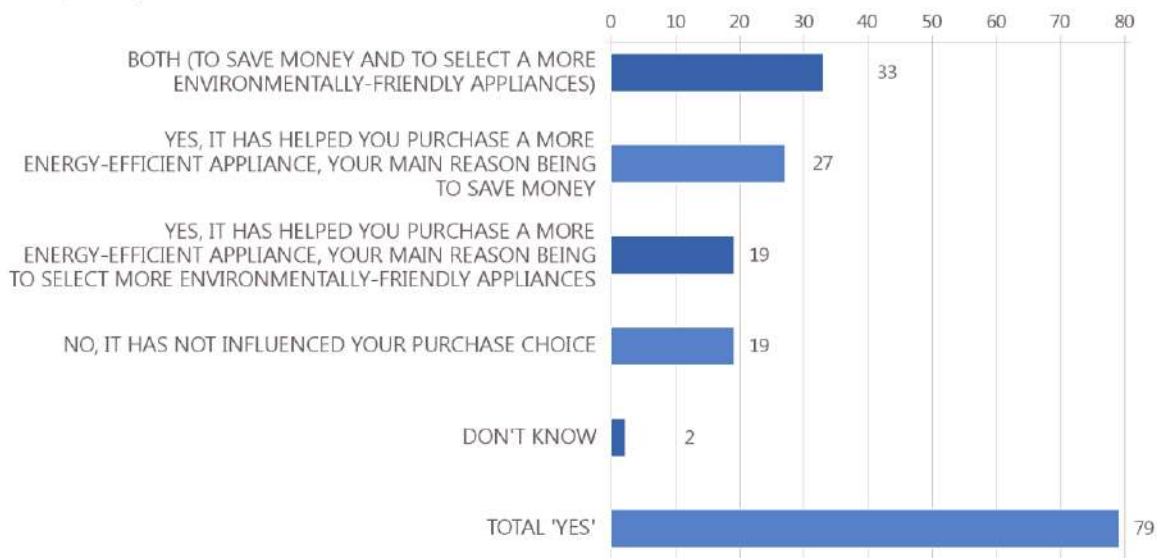
Respondents were asked whether their purchase of electrical appliances have been influenced by the EU energy label¹⁶. Nearly eight in ten respondents say the label **did have an influence on their choice of purchase** of electric appliances (79%), while just under a fifth of those surveyed say it has not influenced their purchase choice (19%).

A third of respondents say they were influenced by the label **both to save money and to select a more environmentally-friendly appliance** (33%), while just over a quarter say the label influenced them to **buy a more energy-efficient appliance with the aim of saving money** (27%).

Just under a fifth say the label influenced them to **purchase a more energy-efficient appliance in order to have a more environmentally-friendly product** (19%).

Just 2% of respondents say they **don't know** if the label had an influence on the choice of their purchase.

QB8 Did the EU energy label have an influence on the choice of your purchase of electric appliances (fridges, washing machines, dish washers, televisions...)? (% - EU)



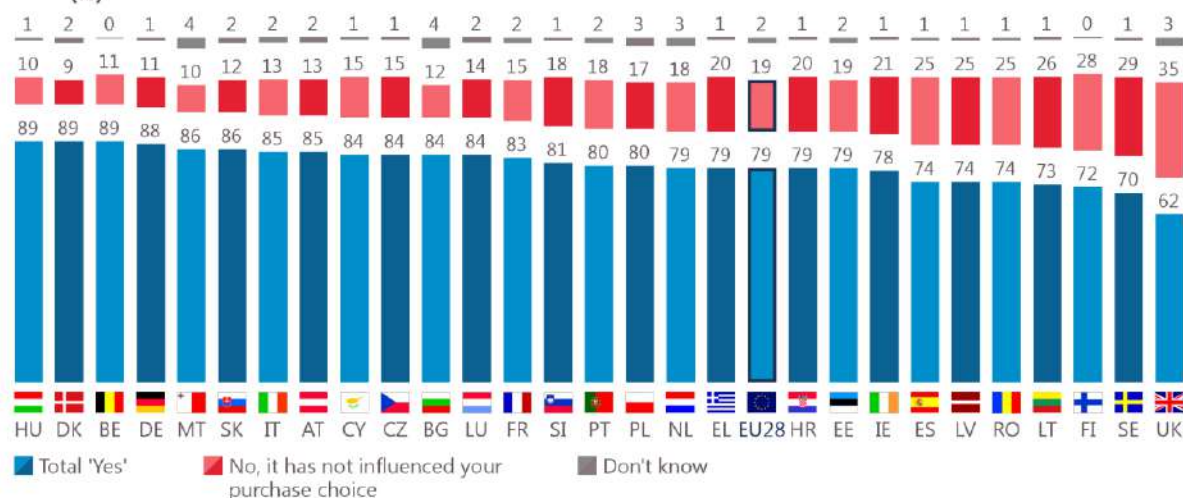
Base: Respondents who recognised the label (n=25,398)

¹⁶Did the EU energy label have an influence on the choice of your purchase of electric appliances (fridges, washing machines, dish washers, televisions...)? Yes, it has helped you purchase a more energy-efficient appliance, your main reason being to save money; Yes, it has helped you purchase a more energy-efficient appliance, your main reason being to select more environmentally-friendly appliances; Both (to save money and to select a more environmentally-friendly appliances); No, it has not influenced your purchase choice; DK.

There are some relatively large country-level variations in the results for the proportion of respondents saying they were influenced or not. At the upper end of the scale, nearly nine in ten of those surveyed in Denmark, Belgium and Hungary (all 89%) say their electrical appliance purchasing decisions **were influenced by the label** and a further 17 countries record results at or above the **EU average of 79%** for this question. At the lower end of the scale, just over six in ten respondents in the United Kingdom (62%) say their purchasing decisions were swayed by the label, while just seven in ten also take this position in Sweden (70%) and Finland (72%).

The countries with the highest proportion of respondents who say their **electrical goods buying decisions have not been affected by the label** are the United Kingdom, where more than a third say this (35%) followed by Sweden and Finland, where almost three in ten say this (29% and 28% respectively). At least a tenth of respondents in all but one of the EU's 28 Member States say their electrical items purchasing decisions have not been influenced by the label. The exception is Denmark, where just under a tenth of those surveyed say this (9%).

QB8 Did the EU energy label have an influence on the choice of your purchase of electric appliances (fridges, washing machines, dish washers, televisions...)? (%)



Base: Respondents who recognised the label (n=25,398)

The most frequently given response in 23 of the EU's 28 countries is that purchasing decisions have been influenced by the label to **both save money and to buy more environmentally-friendly appliances**. This is particularly the case in Malta (49%), Portugal (47%), Greece and Slovenia (45%), though just three in ten respondents in Sweden (30%) and Romania (28%) say this, even though it is the top answer in those countries. It is the second-most given answer in four countries and the third most frequent response in one: The United Kingdom, where just a fifth of respondents (21%) give this answer.

In four EU Member States, the most-given answer is **yes, to save money**, most notably in Latvia (34%) Ireland (32%) and Spain (31%). This is the second highest-ranked answer in 19 other countries and the third most popular response in three: Austria (20%), Finland (21%) and Romania (23%).

The joint most-popular answer in Poland – alongside to save money – is **yes to purchase a more environmentally-friendly appliance**. Just over a quarter of respondents there say this (27%), while it is the second top-rated answer in three countries: Austria (29%), Denmark (23%) and the Netherlands (22%). It is the third most-given answer in 13 other EU countries, principally in Sweden (26%), Italy (24%) and Germany (23%).

Only in the United Kingdom is **no, it has not influenced your purchasing choice** the most popular answer. Over a third of respondents there say this (35%) and it is the second most-given response in four other countries: Sweden (29%), Finland (28%), Romania (25%) and Greece (20%). This is also the third most popular answer in 13 other countries, most notably in Lithuania (26%), Latvia and Spain (both 25%).

QB8 Did the EU energy label have an influence on the choice of your purchase of electric appliances (fridges, washing machines, dish washers, televisions...)? (%)






| | | Both (to save money and to select a more environmentally-friendly appliances) | Yes, to save money | Yes, to select more environmentally-friendly appliances | No, it has not influenced your purchase choice |
|------|--|---|--------------------|---|--|
| EU28 | | 33 | 27 | 19 | 19 |
| BE | | 43 | 25 | 21 | 11 |
| BG | | 41 | 28 | 15 | 12 |
| CZ | | 39 | 31 | 14 | 15 |
| DK | | 43 | 23 | 23 | 9 |
| DE | | 36 | 29 | 23 | 11 |
| EE | | 41 | 28 | 10 | 19 |
| IE | | 28 | 32 | 18 | 21 |
| EL | | 45 | 20 | 14 | 20 |
| ES | | 29 | 31 | 14 | 25 |
| FR | | 35 | 32 | 16 | 15 |
| HR | | 33 | 26 | 20 | 20 |
| IT | | 31 | 30 | 24 | 13 |
| CY | | 42 | 28 | 14 | 15 |
| LV | | 31 | 34 | 9 | 25 |
| LT | | 35 | 28 | 10 | 26 |
| LU | | 40 | 25 | 19 | 14 |
| HU | | 38 | 30 | 21 | 10 |
| MT | | 49 | 20 | 17 | 10 |
| NL | | 41 | 16 | 22 | 18 |
| AT | | 36 | 20 | 29 | 13 |
| PL | | 26 | 27 | 27 | 17 |
| PT | | 47 | 21 | 12 | 18 |
| RO | | 28 | 23 | 23 | 25 |
| SI | | 45 | 21 | 15 | 18 |
| SK | | 40 | 24 | 22 | 12 |
| FI | | 31 | 21 | 20 | 28 |
| SE | | 30 | 14 | 26 | 29 |
| UK | | 21 | 26 | 15 | 35 |
| | | 1st MOST FREQUENTLY MENTIONED ITEM | | | |
| | | 2nd MOST FREQUENTLY MENTIONED ITEM | | | |
| | | 3rd MOST FREQUENTLY MENTIONED ITEM | | | |

Base: Respondents who recognised the label (n=25,398)

The socio-demographic analysis again reveals some significant variations and similarities among the different groups of respondents, including:

- There are very few variations between men and women in this question.
- Respondents aged 15-24 are the **least likely group to be influenced** by the label in their electronic item purchasing decisions (65%) and are the most likely to say they are not influenced (30%).
- Respondents who have stayed in education the longest are the **most likely** to have been influenced by the label (87%), while **those still studying are the least likely** (63%).
- **Students are the least likely** to say they are influenced by the label (63%), while managers (89%) and other white collar workers (88%) are the **most likely**.
- Respondents who say they have **difficulty paying bills** most of the time are the most likely to say their electrical item purchasing decisions have been **influenced by the label in order to save money** (32%), while those who report difficulties occasionally are the most likely to report being influenced overall (81%). Those surveyed who say the **almost never/never have difficulties** are the most likely to report being **influenced by the label to both save money and acquire a more environmentally-friendly appliance** (34%).

QB8 Did the EU energy label have an influence on the choice of your purchase of electric appliances (fridges, washing machines, dish washers, televisions...)?
(% - EU)

| | Both (to save money and to select a more environmentally-friendly appliances) | Yes, to save money | Yes, to select more environmentally-friendly appliances | No, it has not influenced your purchase choice | Total 'Yes' |
|--|---|--------------------|---|--|-------------|
| EU28 | 33 | 27 | 19 | 19 | 79 |
|  Gender | | | | | |
| Man | 33 | 27 | 19 | 19 | 79 |
| Woman | 32 | 28 | 20 | 18 | 80 |
|  Age | | | | | |
| 15-24 | 26 | 22 | 17 | 30 | 65 |
| 25-39 | 35 | 29 | 20 | 15 | 84 |
| 40-54 | 36 | 29 | 21 | 13 | 86 |
| 55 + | 31 | 27 | 19 | 21 | 77 |
|  Education (End of) | | | | | |
| 15- | 28 | 27 | 16 | 26 | 71 |
| 16-19 | 32 | 30 | 18 | 18 | 80 |
| 20+ | 38 | 26 | 23 | 12 | 87 |
| Still studying | 26 | 19 | 18 | 31 | 63 |
|  Socio-professional category | | | | | |
| Self-employed | 37 | 25 | 22 | 14 | 84 |
| Managers | 39 | 29 | 21 | 10 | 89 |
| Other white collars | 37 | 27 | 24 | 11 | 88 |
| Manual workers | 32 | 31 | 19 | 17 | 82 |
| House persons | 31 | 30 | 19 | 19 | 80 |
| Unemployed | 30 | 28 | 13 | 27 | 71 |
| Retired | 31 | 26 | 18 | 23 | 75 |
| Students | 26 | 19 | 18 | 31 | 63 |
|  Difficulties paying bills | | | | | |
| Most of the time | 30 | 32 | 14 | 23 | 76 |
| From time to time | 31 | 28 | 22 | 18 | 81 |
| Almost never/ Never | 34 | 27 | 19 | 18 | 80 |

IV. EU ENERGY PRIORITIES FOR THE NEXT YEARS

Nearly half of those surveyed say the EU should prioritise clean energy technologies in the next 10 years

Finally, respondents were asked which energy issues the EU should prioritise over the next decade¹⁷. Nearly half of those polled say they think the EU should **invest in and develop clean energy technologies** (47%) in the next ten years, this being the most common answer among the respondents. Just under four in ten respondents say they believe the EU should **ensure energy costs are as low as possible** (37%), while a third say they think it ought to **step up international efforts to reduce the impact of energy on climate change** (33%).

Three in ten respondents say they think one of the EU's priorities in the next ten years should be to **reduce overall energy consumption in the EU** (30%), while just over a quarter of those surveyed say they believe its priority should be to **provide EU consumers with clear information to help them make better choices regarding energy providers, new appliances, energy savings, etc.** (26%).

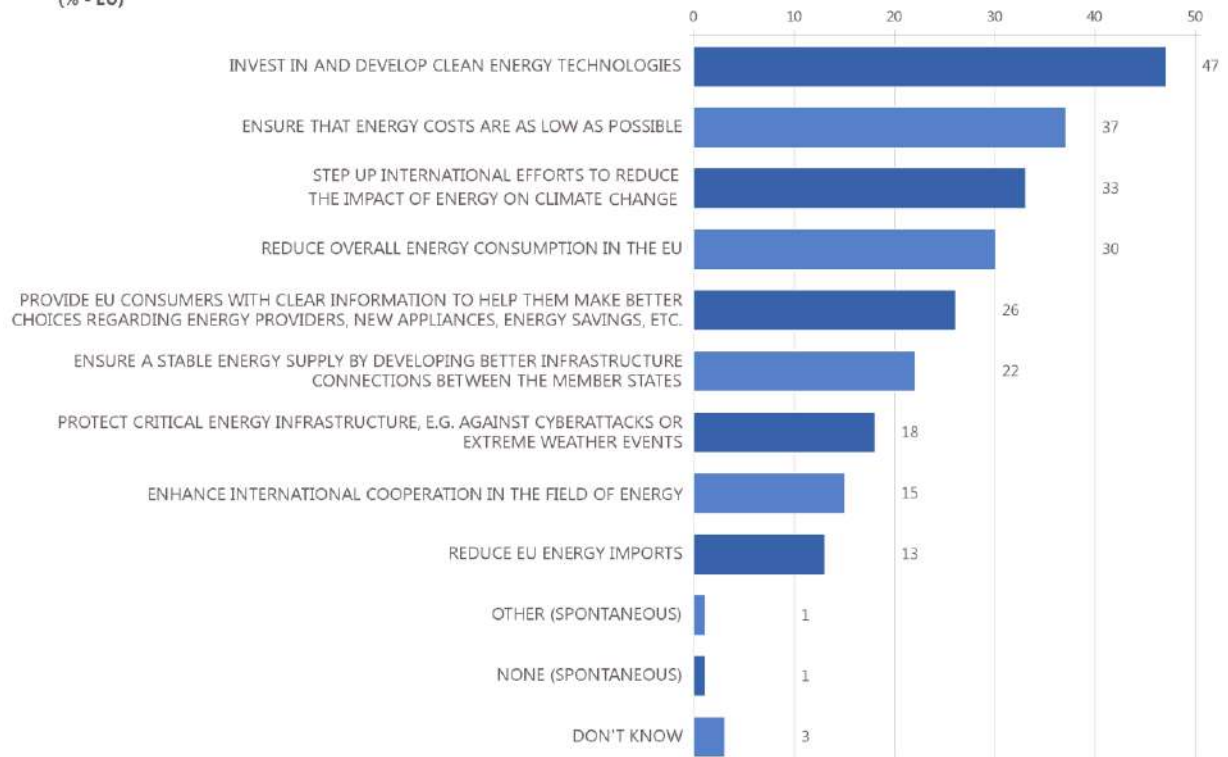
Over a fifth of respondents say they believe the EU's priority in the next ten years should be to **ensure a stable energy supply by developing better infrastructure connections between the Member States** (22%) and just under a fifth say the EU should consider it a priority to **protect critical energy infrastructure, e.g. against cyberattacks or extreme weather events** (18%).

In the next ten years, the EU should prioritise **enhancing international cooperation in the field of energy** according to over a tenth of respondents (15%), while just under that proportion say they think the EU should **reduce energy imports** (13%).

Just 1% of the respondents say **other** priorities, while 1% say **none** and 3% say they **don't know**.

¹⁷In your opinion, which of the following energy issues should the European Union tackle as a priority over the next 10 years? Reduce overall energy consumption in the EU; Ensure a stable energy supply by developing better infrastructure connections between the Member States; Ensure that energy costs are as low as possible; Reduce EU energy imports; Invest in and develop clean energy technologies; Enhance international cooperation in the field of energy; Step up international efforts to reduce the impact of energy on climate change; Protect critical energy infrastructure, e.g. against cyberattacks or extreme weather events; Provide EU consumers with clear information to help them make better choices regarding energy providers, new appliances, energy savings, etc.; Other (SPONTANEOUS); None (SPONTANEOUS); DK.

QB9 In your opinion, which of the following energy issues should the European Union tackle as a priority over the next 10 years? (MAX. 3 ANSWERS)
(% - EU)

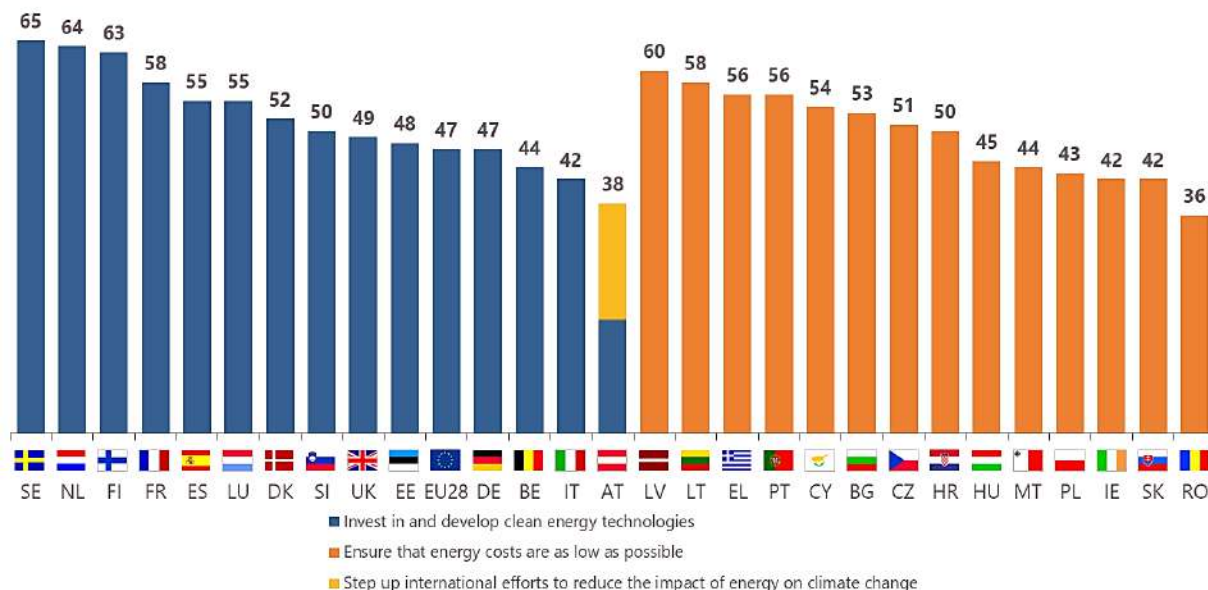


Base: All respondents (n=27,438)

In half of the EU's 28 Member States, the most frequent response is that the EU should **ensure that energy costs are as low as possible** in the next ten years. A majority of respondents say this in seven countries, most notably in Latvia (60%), Lithuania (58%), Greece and Portugal (both 56%), and a relative majority in Croatia (50%) also take this position.

The most-mentioned answer in 13 countries and the joint most-given response in one other – Austria – is that the EU should **invest in and develop clean energy technologies** in the next ten years. Over six in ten respondents in three countries – Sweden (65%), the Netherlands (64%) and Finland (63%) – say this, while a majority in four other countries and a relative majority in one – Slovenia – also take this view. In Austria, nearly four in ten respondents (38%) give this as their answer, with the same proportion in that country also saying the EU should prioritise **stepping up international efforts to reduce the impact of energy on climate change**.

QB9 In your opinion, which of the following energy issues should the European Union tackle as a priority over the next 10 years?
 (MAX. 3 ANSWERS)
 (% - THE MOST MENTIONED ANSWER BY COUNTRY)



Base: All respondents (n=27,438)

At a national level, **invest in and develop clean energy technologies** is the most frequent response in 14 countries, most notably Sweden (65%), the Netherlands (64%) and Finland (63%). It is also the second most common answer in 12 other EU Member States and the third most-mentioned response in the remaining two: Czechia (33%) and Slovakia (32%).

In 14 countries, the most common answer is that the EU should **ensure that energy costs are as low as possible**, particularly in Latvia (60%), Lithuania (58%), Greece and Portugal (both 56%), and it is the second most given answer in five countries: Spain (50%), Belgium (43%), Estonia (39%), Slovenia (38%) and Italy (34%). This response is the third most common in France (36%), the United Kingdom (33%) and Austria (31%).

Only in Austria is the most common answer that the EU must **step up international efforts to reduce the impact of energy on climate change** (38%), though it is the second most-given response in seven countries – in particular Sweden (52%), Denmark and the Netherlands (both 50%). This is also the third most frequent answer in seven other EU Member States, most notably Belgium, Hungary (both 35%) and Finland (34%).

That the EU should prioritise **reducing overall energy consumption in the EU** in the next ten years is not the most common answer in any of the 28 countries, but it is the second most given answer in three: Slovakia (37%), Austria (36%) and Czechia (34%). It is also the third most frequent response in nine others, particularly Denmark (42%) and Sweden (38%).

The second most-given response in one country – Finland (35%) – is that the EU should **provide EU consumers with clear information to help them make better choices regarding energy providers new appliances, energy savings, etc.** This is also the third most-frequent answer in five other countries, with the highest proportions of respondents in Cyprus (39%) and Greece (34%).

That **the EU should ensure a stable energy supply by developing better infrastructure connections between the Member States** is the third most frequent response in just two countries: Estonia (28%) and Latvia (25%). It is not among the top three responses in any other EU country, which is also the case for the remaining three possible statements.

QB9 In your opinion, which of the following energy issues should the European Union tackle as a priority over the next 10 years? (MAX. 3 ANSWERS) (%)

| | | Invest in and develop clean energy technologies | Ensure that energy costs are as low as possible | Step up international efforts to reduce the impact of energy on climate change | Reduce overall energy consumption in the EU | Provide EU consumers with clear information to help them make better choices regarding energy providers, new appliances, energy savings, etc. | Ensure a stable energy supply by developing better infrastructure connections between the Member States | Protect critical energy infrastructure, e.g. against cyberattacks or extreme weather events | Enhance international cooperation in the field of energy | Reduce EU energy imports |
|------|--|---|---|--|---|---|---|---|--|--------------------------|
| EU28 | | 47 | 37 | 33 | 30 | 26 | 22 | 18 | 15 | 13 |
| BE | | 44 | 43 | 35 | 28 | 28 | 26 | 18 | 20 | 18 |
| BG | | 32 | 53 | 17 | 25 | 28 | 27 | 14 | 19 | 12 |
| CZ | | 33 | 51 | 23 | 34 | 20 | 23 | 19 | 16 | 14 |
| DK | | 52 | 19 | 50 | 42 | 20 | 22 | 22 | 19 | 15 |
| DE | | 47 | 29 | 37 | 36 | 24 | 32 | 24 | 16 | 10 |
| EE | | 48 | 39 | 23 | 20 | 22 | 28 | 24 | 12 | 8 |
| IE | | 40 | 42 | 28 | 27 | 24 | 19 | 20 | 17 | 16 |
| EL | | 52 | 56 | 31 | 24 | 34 | 26 | 19 | 14 | 17 |
| ES | | 55 | 50 | 30 | 23 | 27 | 18 | 9 | 12 | 11 |
| FR | | 58 | 36 | 42 | 34 | 29 | 15 | 15 | 10 | 13 |
| HR | | 42 | 50 | 23 | 29 | 26 | 24 | 16 | 14 | 16 |
| IT | | 42 | 34 | 31 | 27 | 30 | 21 | 15 | 18 | 18 |
| CY | | 50 | 54 | 25 | 30 | 39 | 19 | 16 | 13 | 12 |
| LV | | 39 | 60 | 20 | 21 | 21 | 25 | 24 | 12 | 8 |
| LT | | 47 | 58 | 16 | 26 | 19 | 23 | 18 | 12 | 10 |
| LU | | 55 | 30 | 38 | 36 | 24 | 17 | 21 | 11 | 15 |
| HU | | 37 | 45 | 35 | 32 | 24 | 25 | 17 | 16 | 12 |
| MT | | 39 | 44 | 23 | 32 | 24 | 17 | 18 | 14 | 13 |
| NL | | 64 | 22 | 50 | 37 | 28 | 24 | 29 | 14 | 7 |
| AT | | 38 | 31 | 38 | 36 | 30 | 25 | 25 | 21 | 27 |
| PL | | 31 | 43 | 21 | 20 | 26 | 25 | 14 | 22 | 9 |
| PT | | 50 | 56 | 24 | 25 | 32 | 26 | 14 | 13 | 21 |
| RO | | 29 | 36 | 27 | 22 | 26 | 21 | 18 | 20 | 18 |
| SI | | 50 | 38 | 23 | 34 | 23 | 21 | 17 | 15 | 17 |
| SK | | 32 | 42 | 19 | 37 | 22 | 25 | 20 | 13 | 21 |
| FI | | 63 | 26 | 34 | 33 | 35 | 16 | 24 | 13 | 18 |
| SE | | 65 | 12 | 52 | 38 | 26 | 26 | 34 | 10 | 14 |
| UK | | 49 | 33 | 34 | 31 | 21 | 15 | 19 | 9 | 13 |

| |
|------------------------------------|
| 1st MOST FREQUENTLY MENTIONED ITEM |
| 2nd MOST FREQUENTLY MENTIONED ITEM |
| 3rd MOST FREQUENTLY MENTIONED ITEM |





Base: All respondents (n=27,438)

The socio-demographic analysis reveals a range of similarities and some marked differences, including:

- The results for men and women are broadly similar, with differences of no more than three percentage points for any of the possible responses. Men are more likely than women to say the **EU should invest in and develop clean energy technologies** (48% vs 45%), while women are more likely than men to say the **EU should provide EU consumers with clear information to help them make better choices regarding energy suppliers, new appliances, energy savings, etc.** (28% vs 25%).
- Age does not appear to be much of a determining factor in the responses, though those polled aged 55 and more are the most likely to say the EU should **ensure that energy costs are as low as possible** (40%), while those aged 15-24 are the most likely to say the **EU should invest in and develop clean energy technologies** (50%).
- Perhaps unsurprisingly, respondents who are unemployed (45%) are the most likely to say the EU should **ensure that energy costs are as low as possible**, while managers are the least likely to say this (25%). In contrast, managers are the most likely respondents to say the EU should **step up international efforts to reduce the impact of energy on climate change** (46%), while those who are retired (28%) are the least likely to say this.
- Also unsurprising is the fact respondents who have difficulty paying their bills most of the time (48%) are the most likely to say the EU should **ensure that energy costs are as low as possible**, while those who almost never/never have difficulty paying are the least likely to say this (35%).
- Respondents who are not influenced by the label in their purchasing decisions are the most likely to say the EU should **ensure that energy costs are as low as possible** (41%), followed by those who say they are influenced by it to save money (40%). Those surveyed who say they are influenced by the label to purchase more environmentally-friendly appliances are the most likely to say the EU should **step up international efforts to reduce the impact of energy on climate change** (42%).

QB9 In your opinion, which of the following energy issues should the European Union tackle as a priority over the next 10 years? (MAX. 3 ANSWERS)

(% - EU)

| | Invest in and develop clean energy technologies | Ensure that energy costs are as low as possible | Step up international efforts to reduce the impact of energy on climate change | Provide EU consumers with clear information to help them make better choices |
|--|---|---|--|--|
| EU28 | 47 | 37 | 33 | 26 |
|  Gender | | | | |
| Man | 48 | 36 | 33 | 25 |
| Woman | 45 | 38 | 34 | 28 |
|  Age | | | | |
| 15-24 | 50 | 32 | 35 | 25 |
| 25-39 | 47 | 37 | 35 | 26 |
| 40-54 | 48 | 35 | 36 | 28 |
| 55 + | 44 | 40 | 30 | 26 |
|  Socio-professional category | | | | |
| Self-employed | 48 | 37 | 38 | 24 |
| Managers | 54 | 25 | 46 | 27 |
| Other white collars | 48 | 34 | 35 | 29 |
| Manual workers | 45 | 40 | 31 | 27 |
| House persons | 46 | 41 | 29 | 28 |
| Unemployed | 44 | 45 | 30 | 26 |
| Retired | 43 | 41 | 28 | 25 |
| Students | 53 | 27 | 38 | 25 |
|  Difficulties paying bills | | | | |
| Most of the time | 45 | 48 | 27 | 27 |
| From time to time | 41 | 40 | 30 | 28 |
| Almost never/ Never | 49 | 35 | 35 | 26 |
| Influence on the choice of purchase | | | | |
| Yes, save money | 46 | 40 | 32 | 28 |
| Yes, select more environmentally-friendly appliances | 47 | 26 | 42 | 27 |
| Yes, both | 54 | 37 | 38 | 28 |
| No | 43 | 41 | 25 | 22 |

CONCLUSION

The results of this Eurobarometer survey on EU citizens' attitudes towards energy and energy policy in the Union show that Europeans believe that the priorities now, and in the future, should be about securing clean, affordable energy.

Over four in ten respondents say current EU policy is about moving away from fossil fuels towards cleaner energy sources, while over a quarter say it's about reducing consumption.

Significantly, over six in ten respondents say the EU has a responsibility to ensure EU citizens have secure access to energy. Moreover, to ensure access to clean energy, a large majority of respondents agree that it should be the EU's responsibility to encourage more investment in renewable energy (e.g. wind, solar) and to encourage more investment in energy research and innovation.

But this needs to be done affordably. A quarter of those polled in this survey say they think EU energy policy is about reducing costs to consumers, while over half say it should be the EU's responsibility to address energy poverty and ensure a fair energy transition so that no citizen or region is left behind. Also, nearly nine in ten respondents say the EU must be responsible for taking action to ensure competitive market prices, in particular to reduce the number of people unable to pay their energy bills.

The good news is that the EU's efforts to promote energy efficiency through its label on electrical appliances is having an effect. Awareness of the label is high: over nine in ten recognise it and nearly eight in ten respondents say they also know what it stands for (79%), while only just over one in 20 respondents say they have never seen it. Of those who recognise the label, just under eight in ten say it had an influence on their electrical items purchasing decisions, whether to save money, to choose more environmentally-friendly appliances or both.

As for the future, nearly half of respondents say the EU's priority over the next ten years should be to invest in and develop clean energy technologies, while a third say it should step up international efforts to reduce the impact of energy on climate change. Just under four in ten respondents say they believe the EU should focus on ensuring energy costs are as low as possible in the next ten years.

In socio-demographic terms, there are some interesting patterns that emerged during the course of the research. Men and women seem to agree on most topics covered by the survey, with only a few exceptions.

In general, the younger, more educated respondents who are managers and seldom struggle to pay bills are more interested in environmental issues connected with energy, while those who are older, less well-educated and report difficulty paying bills are more likely to raise issues associated with affordability.

Occupation also seems to have a bearing on the answers respondents give, with managers displaying similar characteristics to younger, more educated, better-off respondents and the unemployed, retired or house persons perhaps unsurprisingly being more inclined to be concerned about affordability.

Awareness of the energy label, who is responsible for it and whether it has influenced purchases seems to have a bearing on respondents' answers as well. Generally speaking, the greater the awareness, the more likely the respondent is to focus on environmental issues, while lower levels of recognition are associated with more interest in reducing energy costs.

cxu r qóγs óq- ' .u tuóγw' q' .γxt γ q...óũũó γó q – .ũũũũũũ/ çq"t" – ÷ ζ' r q r γ γũ , " u1R uqsx s" " ÷ç / q " – ruç"v óq- ' .γ w' " γ ÷ó qó t çq " γũ ' ζ' r q r γ γũ ' ç' " çũ " q..ũ' " " .qũ " ó y u ÷" ç q ÷ ÷ũ .s" %ũçqwu " v ÷ku s" " ÷ç , q" t ÷ " " " .qũ " tu" ó y ÷ 1

R " ç t u ç ÷ " t " ó / ÷ku óq- ' .γ w' " γ ÷ó u ç u t çq " ó óũ- qũγq... vç" – uqsx " v ÷ku "qt- γ γóũçũũũũ çũw' " q... " γó / qũũç óũçũũũũũũũũ " r γ t γ %t q... " γũ q" t ÷ " u " v q ç u q l ç x u ÷ ó ç u " ç u ó u " ÷ ÷ku x " .u ÷ũçũũ ç " v ÷ku s" " ÷çũó ó çũ ut qss" ç t γ w ÷ ÷ku N d a X b c l c W d c b R R # ç u ã γ / q..u " ÷ q" t qss" ç t γ w ÷ ÷ku t γóũçγ ÷ " v ÷ku ç u ó t u " ÷ " " .qũ " " v ÷ku ç u ó u s ÷ũũũ " qũ " q..ũũó γ ÷ ç- ó " v – uũç " " .γç / ç q " q" t ç ç q..ç u ç u ó 1

R uqsx " v ÷ku ó u .sũt óq- ' .γ w' " γ ÷ó / q óũçũũ w q t t ç u óó qó t çq " / qũçq"t" – 10 çũç q t t ç u óóó ç u %ũç W ÷ ç q t t ç u óó , u ç u ó u .sũt r óũçq"t çq " çq"t" – ç " ÷ " ' ç " s u t ç u ó / vç" – ÷ku γ γũ ç q t t ç u óó 1 R uqsx x" ó u x" .t / ÷ku ç u ó " " t u " ÷ qó t çq " / qũçq"t" – ÷ " " " " γ w ÷ku " s..ó u ó u r γ ç i t q ç .u , l l ... γ ÷ũçũũ ó u ç u s" " t sũt v ç s u ç u ÷ ÷ ç u s u γ ' u " " .u * ó x " – u ó q" t γ ÷ku q' ' ç' " ç qũ " qũ " q..q" w ç u u l ó v ç ç qó ÷ku t ç q ç q' ÷ ç u γó s " " s u ç " u t / l l Y R ç u s E qó ó u t γ ÷ku " ó u s" " ÷çũó ç u ç u ÷ ç u ó u s x " γ ÷ u qó q % ç q r .u 1

Ó ç u q s x s " " ÷ç / q s " – ' q ç ó " " r u ÷ u u " ÷ku óq- ' .u q" t ÷ku " γ %ũçó qó s ç ç ç u t " ÷ l ç x u d " γ %ũçó t u ó ç γ ÷ " qó t u ç γ ÷ u t vç" – N ç " óũũ " " .qũ " t ç qũ " ç vç" – " qũ " q..óũũũóũç " w ç s u ó l ç " ç q... s" " ÷çũó ó çũ ut / q " qũ " q.. u γ ç u ÷ w' ç " s u t ç u / ó y w – q ç w' q..q" t γ ÷ũç u... ç ç u γ ç u ÷ w' qó s ç ç ç u t " ÷ r ç u ó t " " ÷ ç u d " γ %ũçó t u ó ç γ ÷ " 1 R q..s" " ÷çũó / w u " t u ç / ç u u / ç u w' " q" t ó y u " v... s q .γ ÷ u ç u γ ÷ ç " t s u t γ ÷ku γ ç u ç u ÷ " ' ç " s u t ç u 1 ç " ç ÷ũç qũ " q.. u γ ç u ÷ w " ÷ l l N d q %ũç ç u u ó , / T q " ÷ ç ç q' ' .ç u ó ÷ku " w ç s q... " " .qũ " v ç u ç u ó qó " ç " %t u t r N d a X b c l c " ç " qũ " q..óũũũóũç " w ç s u ó l ç x u ÷ ÷ ç u " " " .qũ " v ç u ç u ó v ç γ ' ÷ ÷ ÷ ç u " " ó u u γ ç u ÷ w' ç " s u t ç u ç u .ç u ÷ u t ç u ç u 1

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Statistical Margins due to the sampling process
(at the 95% level of confidence)

various sample sizes are in rows

various observed results are in columns

| | 5% | 10% | 15% | 20% | 25% | 30% | 35% | 40% | 45% | 50% | |
|---------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| | 95% | 90% | 85% | 80% | 75% | 70% | 65% | 60% | 55% | 50% | |
| N=50 | 6.0 | 8.3 | 9.9 | 11.1 | 12.0 | 12.7 | 13.2 | 13.6 | 13.8 | 13.9 | N=50 |
| N=500 | 1.9 | 2.6 | 3.1 | 3.5 | 3.8 | 4.0 | 4.2 | 4.3 | 4.4 | 4.4 | N=500 |
| N=1000 | 1.4 | 1.9 | 2.2 | 2.5 | 2.7 | 2.8 | 3.0 | 3.0 | 3.1 | 3.1 | N=1000 |
| N=1500 | 1.1 | 1.5 | 1.8 | 2.0 | 2.2 | 2.3 | 2.4 | 2.5 | 2.5 | 2.5 | N=1500 |
| N=2000 | 1.0 | 1.3 | 1.6 | 1.8 | 1.9 | 2.0 | 2.1 | 2.1 | 2.2 | 2.2 | N=2000 |
| N=3000 | 0.8 | 1.1 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.8 | 1.8 | N=3000 |
| N=4000 | 0.7 | 0.9 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | N=4000 |
| N=5000 | 0.6 | 0.8 | 1.0 | 1.1 | 1.2 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 | N=5000 |
| N=6000 | 0.6 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | N=6000 |
| N=7000 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | N=7000 |
| N=7500 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | N=7500 |
| N=8000 | 0.5 | 0.7 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | N=8000 |
| N=9000 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | N=9000 |
| N=10000 | 0.4 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | N=10000 |
| N=11000 | 0.4 | 0.6 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | N=11000 |
| N=12000 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | N=12000 |
| N=13000 | 0.4 | 0.5 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 | N=13000 |
| N=14000 | 0.4 | 0.5 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | N=14000 |
| N=15000 | 0.3 | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | N=15000 |
| | 5% | 10% | 15% | 20% | 25% | 30% | 35% | 40% | 45% | 50% | |
| | 95% | 90% | 85% | 80% | 75% | 70% | 65% | 60% | 55% | 50% | |

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| 4 | cxu Nd – óüu" ó çu qssuóó ü' u" uq' ü' q...Nd syü u" ó | | | | | | | 8 |
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| 7 | L" " uqçüü" ruü uu" N ζ' uq' V u- ruç büüüüó óx" .t ru v çixuç óüüü wüxu" ut ü' wüüü q... N ζ' uq' ó qssuóó ü' óus çu/ vü q" syq... qw' çt qr.u q" t s.uq' u" uq' | | | | | | | 8 |

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| 4 | b ' ' " çü- uqó çuó ü' ÿ sçµqóu üxu u" uq'w ' uq' ç- q" su " v r ytÿ wó | | | 4 | 5 | 6 | 7 | 8 |
| 5 | N" s" çqwu - " çu ÿ %üóü- u" ü ÿ çu" u qr.u u" uq'w uüwü ÿ t / ó" .qç | | | 4 | 5 | 6 | 7 | 8 |
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|------|---|--|---|--|--|--|---|
| Nd5? |  | 55 | 4A | 48 | 74 | 5? | 4? |
| KN |  | 5A | 53 | 56 | 75 | 64 | 5? |
| KP |  | 56 | 4: | 5? | 57 | 64 | 5? |
| Li |  | 53 | 48 | 54 | 5A | 66 | 5: |
| MT |  | 65 | 4A | 46 | 85 | 5? | 47 |
| MN |  | 65 | 59 | 4: | 87 | 65 | 47 |
| NN |  | 5? | 46 | 47 | 68 | 55 | 49 |
| RN |  | 47 | 4: | 46 | 74 | 58 | 55 |
| NU |  | 59 | 59 | 4? | 76 | 59 | 47 |
| Nb |  | 45 | 4: | 43 | 78 | 53 | 47 |
| Qa |  | 53 | 46 | 48 | 74 | 6: | 55 |
| Qa |  | 4A | 4? | 4A | 69 | 63 | 46 |
| Rc |  | 58 | 54 | 44 | 6: | 5: | 54 |
| Lh |  | 59 | 54 | 43 | 77 | 67 | 45 |
| Ue |  | 4: | 48 | 47 | 65 | 5A | 53 |
| Uc |  | 55 | 43 | 4? | 66 | 56 | 69 |
| Ud |  | 5A | 54 | 46 | 75 | 66 | 54 |
| Qd |  | 58 | 48 | 4? | 68 | 66 | 47 |
| V c |  | 4A | 49 | 53 | 63 | 54 | 63 |
| WU |  | 5? | 56 | 4? | 94 | 84 | 49 |
| l c |  | 66 | 5A | 5: | 76 | 65 | 59 |
| YU |  | 4A | 53 | 4A | 64 | 59 | 49 |
| Yc |  | 5: | 63 | 47 | 7? | 4: | 4? |
| aX |  | 4? | 56 | 46 | 63 | 65 | 48 |
| bR |  | 4? | 4? | 48 | 73 | 67 | 4A |
| bT |  | 53 | 48 | 59 | 63 | 5: | 69 |
| OR |  | 5: | 43 | 47 | 93 | 57 | 63 |
| bN |  | 6? | 4: | : | 95 | 56 | 53 |
| dT |  | 45 | 44 | 43 | 66 | 4A | 4: |

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| Nd5? |  | 4A | 57 | 5: | 5 | 7 | 9 |
| KN |  | 4A | 58 | 64 | 3 | 7 | 4 |
| KP |  | 45 | 4A | 76 | 4 | 3 | 7 |
| Li |  | 45 | 48 | 5? | 5 | 3 | 7 |
| MT |  | 53 | 54 | 53 | 4 | 5 | 45 |
| MN |  | 54 | 4? | 56 | 5 | 7 | 5 |
| NN |  | ? | 4: | 57 | 6 | 3 | 46 |
| RN |  | 53 | 55 | 65 | 6 | 5 | 8 |
| NU |  | 49 | 6: | 84 | 4 | 7 | 4 |
| Nb |  | 53 | 67 | 69 | 4 | 5 | : |
| Qa |  | 4? | 58 | 59 | 6 | 7 | : |
| Qa |  | 4? | 5: | 69 | 4 | 5 | 6 |
| Rç |  | 53 | 67 | 63 | 4 | 7 | 7 |
| Lh |  | 48 | 5? | 7? | 4 | 5 | 6 |
| Ue |  | 43 | 4A | 66 | 5 | 6 | A |
| Uç |  | 45 | 54 | 6: | 5 | 4 | 6 |
| Ud |  | 4: | 59 | 58 | 6 | 8 | 5 |
| Qd |  | 49 | 4A | 6: | 4 | 6 | 4 |
| V ç |  | 54 | 56 | 6A | 4 | 4 | 9 |
| WU |  | 57 | 63 | ? | 4 | 8 | 5 |
| l ç |  | 58 | 57 | 5: | 5 | 4 | 4 |
| YU |  | 4A | 53 | 59 | 5 | 5 | 9 |
| Yç |  | 49 | 63 | 79 | 5 | 4 | 7 |
| aX |  | 54 | 55 | 68 | 4 | 6 | 6 |
| bR |  | 4: | 53 | 67 | 6 | 5 | 5 |
| bT |  | 47 | 4: | 5A | 4 | 7 | 6 |
| QR |  | 58 | 5: | 57 | 4 | 5 | 6 |
| bN |  | 63 | 66 | : | 5 | 5 | 9 |
| dT |  | 49 | 49 | 4: | 6 | 4 | 55 |

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|------|--|----------------|----------------|--------------------|--------------------|--------------|-----------------|--------------------|
| Nd5? | | 94 | 64 | 7 | 4 | 6 | A5 | 8 |
| KN | | 88 | 74 | 7 | 3 | 3 | A9 | 7 |
| KP | | 99 | 5A | 5 | 3 | 6 | A8 | 5 |
| Li | | 86 | 6: | 9 | 5 | 5 | A3 | ? |
| MT | | 98 | 55 | 7 | 7 | 8 | ?: | ? |
| MN | | : 5 | 58 | 5 | 3 | 4 | A: | 5 |
| NN | | 93 | 67 | 5 | 4 | 6 | A7 | 6 |
| RN | | 8A | 67 | 6 | 4 | 6 | A6 | 7 |
| NU | | 9? | 5? | 6 | 3 | 4 | A9 | 6 |
| Nb | | ? 5 | 49 | 4 | 3 | 4 | A? | 4 |
| Qa | | 94 | 66 | 4 | 4 | 7 | A7 | 5 |
| Qa | | 8: | 67 | 8 | 5 | 5 | A4 | : |
| R | | 7? | 73 | : | 5 | 6 | ?? | A |
| Lh | | :: | 53 | 4 | 3 | 5 | A: | 4 |
| Ue | | 9: | 58 | 5 | 4 | 8 | A5 | 6 |
| Uc | | 97 | 64 | 5 | 4 | 5 | A8 | 6 |
| Ud | | 94 | 63 | 5 | 5 | 8 | A4 | 7 |
| Qd | | 95 | 5A | 9 | 6 | 3 | A4 | A |
| V c | | 96 | 66 | 3 | 3 | 7 | A9 | 3 |
| WU | | 97 | 63 | 5 | 6 | 4 | A7 | 8 |
| I c | | 8A | 64 | : | 5 | 4 | A3 | A |
| YU | | 79 | 76 | : | 4 | 6 | ? A | ? |
| Yc | | 99 | 65 | 3 | 3 | 5 | A? | 3 |
| aX | | 6: | 66 | 4? | 8 | : | : 3 | 56 |
| bR | | ? 3 | 4: | 5 | 4 | 3 | A: | 6 |
| bT | | 86 | 6A | 6 | 4 | 7 | A5 | 7 |
| OR | | 95 | 64 | 8 | 4 | 4 | A6 | 9 |
| bN | | 89 | 64 | ? | 6 | 5 | ?: | 44 |
| dT | | 8: | 5A | 6 | 6 | ? | ? 9 | 9 |

i P7B c" xqüu ü"üt" " qwçuu " ç t ýqçwçuu ýx üxu v' ...". ý wóçüü- u"üçG

m 'Sn' ' '... ' '... ..% ' 1 3 3 ' ' ... ' 1 ' ... ' ' ' % ' ' ..% ' ' ... ' ' ' % ' ; -

| | | c" üq... qwçuu | cu"t ü" qwçuu | cu"t ü" t ýqçwçuu | c" üq... t ýqçwçuu | M" " ü" " " " | c" üq... ýqçuu* | c" üq... ýqçwçuu* |
|------|--|----------------|---------------|-------------------|--------------------|---------------|-----------------|-------------------|
| Nd5? | | 87 | 68 | 9 | 5 | 6 | ? A | ? |
| KN | | 85 | 74 | 9 | 4 | 3 | A6 | : |
| KP | | 97 | 5A | 5 | 4 | 7 | A6 | 6 |
| Li | | 74 | 76 | 43 | 6 | 6 | ? 7 | 46 |
| MT | | 7A | 68 | A | 5 | 8 | ? 7 | 44 |
| MN | | 8? | 66 | 8 | 5 | 5 | A4 | : |
| NN | | 7: | 74 | 9 | 5 | 7 | ?? | ? |
| RN | | 95 | 66 | 6 | 3 | 5 | A8 | 6 |
| NU | | 9: | 63 | 5 | 3 | 4 | A: | 5 |
| Nb | | ? 3 | 4? | 4 | 3 | 4 | A? | 4 |
| Qa | | 84 | 6A | 6 | 5 | 8 | A3 | 8 |
| Qa | | 89 | 68 | 8 | 5 | 5 | A4 | : |
| Rc | | 78 | 75 | A | 4 | 6 | ? : | 43 |
| Lh | | : 6 | 55 | 5 | 4 | 5 | A8 | 6 |
| Ue | | 98 | 57 | 6 | 4 | : | ? A | 7 |
| Uc | | 96 | 65 | 5 | 4 | 5 | A8 | 6 |
| Ud | | 84 | 6? | 8 | 4 | 8 | ? A | 9 |
| Qd | | 8: | 63 | 43 | 5 | 4 | ? : | 45 |
| Vc | | 96 | 66 | 3 | 3 | 7 | A9 | 3 |
| WU | | 84 | 68 | A | 7 | 4 | ? 9 | 46 |
| I c | | 88 | 67 | ? | 5 | 4 | ? A | 43 |
| YU | | 76 | 79 | 8 | 5 | 7 | ? A | : |
| Yc | | 99 | 65 | 3 | 3 | 5 | A? | 3 |
| aX | | 74 | 69 | 49 | 6 | 7 | :: | 4A |
| bR | | :: | 53 | 5 | 4 | 3 | A: | 6 |
| bT | | 79 | 77 | 8 | 4 | 7 | A3 | 9 |
| QR | | 75 | 79 | ? | 5 | 5 | ?? | 43 |
| bN | | 65 | 6? | 4: | A | 7 | : 3 | 59 |
| dT | | 88 | 66 | 6 | 5 | : | ?? | 8 |

i P83 c" xqüu ü" üt" " qwçuu " ç t ýqçuu ýx üu v' ...". ý wóçüü- u" üóGR " ç t uç ü' u" ó çu qssuóó ü' óus çu u" uq' w / ýi ý " usuoóqç

T ' 'Sn' ' ' ' ...' ' ' ' , -

| | | c" üq... qwçuu | cu" t ü' qwçuu | cu" t ü' t ýqçuu | c" üq... t ýqçuu | M" " ü" o" " | c" üq... ü' wçuu* | c" üq... Móçqçuu* |
|------|--|----------------|----------------|------------------|------------------|--------------|-------------------|-------------------|
| Nd5? | | 6: | 73 | A | 6 | 44 | :: | 45 |
| KN | | 68 | 83 | 43 | 5 | 6 | ? 8 | 45 |
| KP | | 69 | 67 | 7 | 4 | 58 | : 3 | 8 |
| Li | | 5A | 75 | 45 | 6 | 47 | : 4 | 48 |
| MT | | 78 | 68 | A | 5 | A | ? 3 | 44 |
| MN | | 6: | 6: | 43 | 4 | 48 | : 7 | 44 |
| NN | | 67 | 75 | 8 | 6 | 49 | : 9 | ? |
| RN | | 84 | 6: | 7 | 4 | : | ?? | 8 |
| NU | | 73 | 74 | : | 4 | 44 | ? 4 | ? |
| Nb | | 8? | 5: | 6 | 3 | 45 | ? 8 | 6 |
| Qa | | 5? | 74 | 46 | 8 | 46 | 9A | 4? |
| Qa | | 68 | 74 | ? | 5 | 47 | : 9 | 43 |
| Rc | | 68 | 79 | 43 | 6 | 9 | ? 4 | 46 |
| Lh | | 85 | 5A | 9 | 5 | 44 | ? 4 | ? |
| Ue | | 6? | 5? | 8 | 5 | 5: | 99 | : |
| Uc | | 88 | 6? | 5 | 3 | 8 | A6 | 5 |
| Ud | | 69 | 77 | : | 6 | 43 | ? 3 | 43 |
| Qd | | 6: | 76 | 44 | 7 | 8 | ? 3 | 48 |
| Vc | | 86 | 6? | 3 | 3 | A | A4 | 3 |
| WU | | 67 | 75 | 48 | 6 | 9 | : 9 | 4? |
| Ic | | 6: | 73 | 46 | 6 | : | :: | 49 |
| YU | | 68 | 78 | ? | 5 | 43 | ? 3 | 43 |
| Yc | | 6A | 84 | 5 | 3 | ? | A3 | 5 |
| aX | | 6: | 68 | 4? | 6 | : | : 5 | 54 |
| bR | | 94 | 5A | 9 | 5 | 5 | A3 | ? |
| bT | | 64 | 7: | 8 | 4 | 49 | : ? | 9 |
| OR | | 5: | 75 | 53 | 4 | 43 | 9A | 54 |
| bN | | 59 | 69 | 53 | A | A | 95 | 5A |
| dT | | 6? | 73 | 9 | 6 | 46 | : ? | A |






























i P83 c" xqüu ü"üt" " qwçuu "ç t ýqçuu ýç üxu v'...". ý wóçüü– u"üGR " çt ucü ü" ó çu qssuóó ü' óus çu u" ucw / ýçý " ususóóçç

T ' 'Sn' ' ... ' ' ' ' ' ' ... ' ' ' ' ' ' ; -

| | | c" üq... qwçuu | cu"t ü' qwçuu | cu"t ü' t ýqçuu | c" üq... t ýqçuu | M" " ü" " " | c" üq... ýçuu* | c" üq... Mýqçuu* |
|------|--|----------------|---------------|-----------------|------------------|-------------|----------------|------------------|
| Nd5? | | 79 | 6: | ? | 5 | : | ? 6 | 43 |
| KN | | 75 | 7? | : | 4 | 5 | A3 | ? |
| KP | | 7: | 6: | 6 | 4 | 45 | ? 7 | 7 |
| Li | | 6A | 77 | A | 5 | 9 | ? 6 | 44 |
| MT | | 7A | 67 | ? | 5 | : | ? 6 | 43 |
| MN | | 8: | 64 | ? | 4 | 6 | ?? | A |
| NN | | 6? | 76 | 8 | 4 | 46 | ? 4 | 9 |
| RN | | 86 | 68 | 7 | 4 | : | ?? | 8 |
| NU | | 86 | 6: | 8 | 4 | 7 | A3 | 9 |
| Nb | | 96 | 57 | 5 | 4 | 43 | ? : | 6 |
| Qa | | 74 | 6? | ? | 5 | 44 | : A | 43 |
| Qa | | 7A | 6: | 9 | 5 | 9 | ? 9 | ? |
| Rç | | 6A | 77 | ? | 6 | 9 | ? 6 | 44 |
| Lh | | 9A | 57 | 6 | 3 | 7 | A6 | 6 |
| Ue | | 86 | 64 | 7 | 4 | 44 | ? 7 | 8 |
| Uc | | 8A | 67 | 6 | 3 | 7 | A6 | 6 |
| Ud | | 79 | 6: | 9 | 4 | 43 | ? 6 | : |
| Qd | | 78 | 6? | 44 | 6 | 6 | ? 6 | 47 |
| V c | | 8: | 69 | 5 | 3 | 8 | A6 | 5 |
| WU | | 7? | 68 | 43 | 7 | 6 | ? 6 | 47 |
| I c | | 76 | 73 | 44 | 7 | 5 | ? 6 | 48 |
| YU | | 6? | 7: | : | 5 | 9 | ? 8 | A |
| Yc | | 77 | 79 | 4 | 4 | ? | A3 | 5 |
| aX | | 68 | 6: | 4: | 7 | : | : 5 | 54 |
| bR | | 9A | 58 | 7 | 4 | 4 | A7 | 8 |
| bT | | 73 | 7: | 7 | 5 | : | ? : | 9 |
| QR | | 76 | 76 | A | 3 | 8 | ? 9 | A |
| bN | | 73 | 69 | 45 | 9 | 9 | : 9 | 4? |
| dT | | 73 | 6: | ? | 8 | 43 | : : | 46 |

i P83 c" xqüu ü" üt" " qwçuu " ç t ýqçuu ýx üu v' ...". ý wóçüü- u" üóGR " ç t uç ü' u" ó çu qssuóó ü' óus çu u" uçw / ýiý " usuóóqç

m' ... '... 2 ' ' '... ' 'Sn', -

| | c" üq... qwçuu | cü" t ü' qwçuu | cü" t ü' t ýqçuu | c" üq... t ýqçuu | M" " ü' " " " | c" üq... ý wçuu* | c" üq... ýqçuu* |
|------|---|----------------|------------------|------------------|---------------|------------------|-----------------|
| Nd5? |  86 | 69 | 8 | 4 | 8 | ? A | 9 |
| KN |  83 | 79 | 6 | 3 | 4 | A9 | 6 |
| KP |  87 | 66 | 7 | 4 | ? | ? : | 8 |
| Li |  78 | 74 | A | 4 | 7 | ? 9 | 43 |
| MT |  : 3 | 53 | 6 | 5 | 8 | A3 | 8 |
| MN |  9? | 5? | 5 | 4 | 4 | A9 | 6 |
| NN |  87 | 68 | 6 | 4 | : | ? A | 7 |
| RN |  8A | 67 | 6 | 3 | 7 | A6 | 6 |
| NU |  94 | 65 | 5 | 4 | 7 | A6 | 6 |
| Nb |  9? | 56 | 5 | 3 | : | A4 | 5 |
| Qa |  77 | 76 | 6 | 4 | A | ? : | 7 |
| Qa |  84 | 6? | 9 | 5 | 6 | ? A | ? |
| Rt |  74 | 77 | A | 5 | 7 | ? 8 | 44 |
| Lh |  : 6 | 55 | 5 | 3 | 6 | A8 | 5 |
| Ue |  97 | 57 | 6 | 4 | ? | ?? | 7 |
| Uc |  98 | 5A | 6 | 3 | 6 | A7 | 6 |
| Ud |  88 | 6: | 6 | 3 | 8 | A5 | 6 |
| Qd |  7A | 69 | A | 6 | 6 | ? 8 | 45 |
| V c |  8A | 67 | 4 | 3 | 9 | A6 | 4 |
| WU |  93 | 66 | 6 | 5 | 5 | A6 | 8 |
| I c |  84 | 6? | ? | 5 | 4 | ? A | 43 |
| YU |  6A | 7A | 9 | 5 | 7 | ?? | ? |
| Yc |  89 | 6? | 4 | 3 | 8 | A7 | 4 |
| aX |  74 | 66 | 4? | 6 | 8 | : 7 | 54 |
| bR |  : 8 | 55 | 5 | 3 | 4 | A: | 5 |
| bT |  7: | 76 | 6 | 4 | 9 | A3 | 7 |
| OR |  85 | 73 | 7 | 4 | 6 | A5 | 8 |
| bN |  74 | 6? | 45 | 8 | 7 | : A | 4: |
| dT |  83 | 68 | 7 | 5 | A | ? 8 | 9 |

i P83 c" xqūu ū" ūt" " qwζu " ζ t γqwζu γix ūu v' ...". ψ wóqūū- u" ūGR " ζt uζ ū' u" ó ζu qssuóó ū' óus ζu u" uq'w / ψiψ " usuoóqζ

m' ... ' ... ' ... % ' ... ' ... ' ... % 'Sn'e % 'l ... ', -

| | | c" ūq... qwζu | cu" t ū' qwζu | cu" t ū' t γqwζu | c" ūq... t γqwζu | M' " xj' o " " | c" ūq... t wζu* | c" ūq... t γqwζu* |
|------|--|---------------|---------------|------------------|------------------|----------------|-----------------|-------------------|
| Nd5? | | 83 | 69 | 8 | 4 | ? | ? 9 | 9 |
| KN | | 7A | 77 | 9 | 3 | 4 | A6 | 9 |
| KP | | 83 | 65 | 6 | 4 | 47 | ? 5 | 7 |
| Li | | 75 | 75 | ? | 5 | 9 | ? 7 | 43 |
| MT | | 97 | 56 | 7 | 5 | : | ? : | 9 |
| MN | | 94 | 5A | 7 | 4 | 8 | A3 | 8 |
| NN | | 85 | 6: | 6 | 3 | ? | ? A | 6 |
| RN | | 8: | 68 | 5 | 3 | 9 | A5 | 5 |
| NU | | 86 | 6? | 5 | 4 | 9 | A4 | 6 |
| Nb | | 98 | 57 | 4 | 3 | 43 | ? A | 4 |
| Qa | | 7: | 6? | 6 | 4 | 44 | ? 8 | 7 |
| Qa | | 79 | 6A | 9 | 6 | 9 | ? 8 | A |
| Rc | | 6? | 75 | A | 5 | A | ? 3 | 44 |
| Lh | | : 5 | 53 | 5 | 4 | 8 | A5 | 6 |
| Ue | | 8A | 59 | 5 | 4 | 45 | ? 8 | 6 |
| Uc | | 98 | 5A | 4 | 3 | 8 | A7 | 4 |
| Ud | | 86 | 69 | 6 | 4 | : | ? A | 7 |
| Qd | | 7: | 6? | A | 5 | 7 | ? 8 | 44 |
| Vc | | 8: | 68 | 3 | 3 | ? | A5 | 3 |
| WU | | 95 | 64 | 5 | 5 | 6 | A6 | 7 |
| Ic | | 78 | 6? | 43 | 5 | 8 | ? 6 | 45 |
| YU | | 6? | 7A | 8 | 5 | 9 | ? : | : |
| Yc | | 7? | 76 | 4 | 3 | ? | A4 | 4 |
| aX | | 6A | 69 | 48 | 6 | : | : 8 | 4? |
| bR | | 9A | 58 | 6 | 4 | 5 | A7 | 7 |
| bT | | 74 | 79 | 6 | 4 | A | ? : | 7 |
| OR | | 88 | 68 | 6 | 4 | 9 | A3 | 7 |
| bN | | 97 | 5: | 7 | 4 | 7 | A4 | 8 |
| dT | | 7A | 66 | 7 | 5 | 45 | ? 5 | 9 |

i P83A c" xqüu ü"üt" " qwçuu "ç t ýqçuu ýx üu v' ...". ý wóçüü- u"üGR " çt uç ü' u" ó çu qssuóó ü' óus çu u" uq'w / ýüý " usuóóqç

m' ' ...' ...' ' ' ... ' ...' ' ' 'Sn', -

| | | c" üq... qwçuu | cü" t ü' qwçuu | cü" t ü' t ýqçuu | c" üq... t ýqçuu | M" " ü' " " " | c" üq...! wçuu* | c" üq...! ýqçuu* |
|------|--|----------------|----------------|------------------|------------------|---------------|-----------------|------------------|
| Nd5? | | 88 | 63 | 9 | 6 | 9 | ? 8 | A |
| KN | | 85 | 73 | 9 | 5 | 3 | A5 | ? |
| KP | | 95 | 5: | 6 | 4 | : | ? A | 7 |
| Li | | 94 | 5A | 9 | 4 | 6 | A3 | : |
| MT | | 93 | 4: | : | ? | ? | :: | 48 |
| MN | | 8: | 56 | A | : | 7 | ? 3 | 49 |
| NN | | 95 | 5A | 5 | 4 | 9 | A4 | 6 |
| RN | | 95 | 63 | 6 | 4 | 7 | A5 | 7 |
| NU | | 98 | 59 | 5 | 5 | 8 | A4 | 7 |
| Nb | | 9? | 54 | 5 | 5 | : | ? A | 7 |
| Qa | | 85 | 67 | 6 | 6 | ? | ? 9 | 9 |
| Qa | | 8: | 66 | 8 | 6 | 5 | A3 | ? |
| Rt | | 78 | 6? | A | 6 | 8 | ? 6 | 45 |
| Lh | | : 5 | 4A | 6 | 5 | 7 | A4 | 8 |
| Ue | | : 4 | 4: | 5 | 4 | A | ?? | 6 |
| Uc | | : ? | 53 | 3 | 3 | 5 | A? | 3 |
| Ud | | 8A | 57 | 9 | 6 | ? | ? 6 | A |
| Qd | | 7: | 67 | 45 | 7 | 6 | ? 4 | 49 |
| V c | | 93 | 65 | 3 | 4 | : | A5 | 4 |
| WU | | 89 | 57 | : | A | 7 | ? 3 | 49 |
| I c | | 88 | 5A | ? | 8 | 6 | ? 7 | 46 |
| YU | | 78 | 75 | : | 5 | 7 | ?: | A |
| Yc | | 8? | 69 | 4 | 3 | 8 | A7 | 4 |
| aX | | 68 | 69 | 49 | 7 | A | : 4 | 53 |
| bR | | :: | 4? | 5 | 5 | 4 | A8 | 7 |
| bT | | 89 | 68 | 6 | 4 | 8 | A4 | 7 |
| OR | | 9? | 58 | 7 | 4 | 5 | A6 | 8 |
| bN | | : 5 | 4: | 6 | 8 | 6 | ? A | ? |
| dT | | 8? | 59 | 7 | 6 | A | ? 7 | : |






























i P936 c" xqüu ü" üt" " qwçuu " ç t ýqçuu ýx üx v' ... ý wóçüü- u" üGRióx" .t r u üx Nd' ó çuó' " " óç çüü ü'

l ... ' ... ' ... ' ... ' ... ' ... ' % ' , -

| | | c" üq... qwçuu | cu" t ü' qwçuu | cu" t ü' t ýqçuu | c" üq... t ýqçuu | M" " ü' " " " | c" üq... ü' wçuu* | c" üq... Mçqçuu* |
|------|--|----------------|----------------|------------------|------------------|---------------|-------------------|------------------|
| Nd5? | | 84 | 6: | 9 | 5 | 7 | ?? | ? |
| KN | | 6A | 83 | A | 4 | 4 | ? A | 43 |
| KP | | 93 | 65 | 7 | 4 | 6 | A5 | 8 |
| Li | | 79 | 75 | : | 5 | 6 | ?? | A |
| MT | | 79 | 66 | A | 8 | : | : A | 47 |
| MN | | 84 | 69 | A | 5 | 5 | ?: | 44 |
| NN | | 7? | 75 | 9 | 4 | 6 | A3 | : |
| RN | | 8A | 68 | 5 | 3 | 7 | A7 | 5 |
| NU | | 94 | 66 | 6 | 3 | 6 | A7 | 6 |
| Nb | | :: | 4A | 4 | 3 | 6 | A9 | 4 |
| Qa | | 86 | 6: | 6 | 4 | 9 | A3 | 7 |
| Qa | | 8A | 65 | 8 | 5 | 5 | A4 | : |
| Rc | | 73 | 7? | : | 5 | 6 | ?? | A |
| Lh | | : 6 | 55 | 3 | 5 | 6 | A8 | 5 |
| Ue | | 96 | 58 | 5 | 5 | ? | ?? | 7 |
| Uc | | 9? | 5? | 5 | 3 | 5 | A9 | 5 |
| Ud | | 87 | 66 | : | 4 | 8 | ?: | ? |
| Qd | | 86 | 68 | : | 7 | 4 | ?? | 44 |
| Vc | | 99 | 5? | 4 | 3 | 8 | A7 | 4 |
| WU | | 7: | 69 | 44 | 7 | 5 | ? 6 | 48 |
| I c | | 7: | 73 | 43 | 5 | 4 | ?: | 45 |
| YU | | 76 | 7? | 9 | 4 | 5 | A4 | : |
| Yc | | 7? | 7? | 4 | 3 | 6 | A9 | 4 |
| aX | | 77 | 67 | 49 | 5 | 7 | : ? | 4? |
| bR | | : 8 | 55 | 5 | 3 | 4 | A: | 5 |
| bT | | 75 | 7? | 6 | 5 | 8 | A3 | 8 |
| QR | | 68 | 7? | 45 | 5 | 6 | ? 6 | 47 |
| bN | | 7: | 6? | A | 7 | 5 | ? 8 | 46 |
| dT | | 86 | 67 | 6 | 5 | ? | ?: | 8 |

i P93 c" xqūu ū" ūt" " qwqūu " ζ t ýqwqūu ýx ūx v' ...". ý wóqūū- u" ūóGRiόx" .t r u ūx Nd' ó qūó' " " óγ γxi ū'

S ... ' ' ' ' ..% ' ' 33 1 ...', -

| | c" ūq... qwqūu | cū" t ū' qwqūu | cū" t ū' t ýqwqūu | c" ūq... t ýqwqūu | M" " ū' ó " " | c" ūq...! wqūu* | c" ūq...! Mýqwqūu* |
|------|---|----------------|-------------------|-------------------|---------------|-----------------|--------------------|
| Nd5? |  93 | 63 | 8 | 5 | 6 | A3 | : |
| KN |  85 | 75 | 8 | 4 | 3 | A7 | 9 |
| KP |  84 | 6? | 7 | 4 | 9 | ? A | 8 |
| Li |  7: | 68 | 45 | 6 | 6 | ? 5 | 48 |
| MT |  : 3 | 54 | 6 | 6 | 6 | A4 | 9 |
| MN |  9: | 58 | 9 | 4 | 4 | A5 | : |
| NN |  85 | 6: | 7 | 6 | 7 | ? A | : |
| RN |  96 | 65 | 5 | 4 | 5 | A8 | 6 |
| NU |  : 4 | 59 | 5 | 3 | 4 | A: | 5 |
| Nb |  ? 4 | 4: | 3 | 3 | 5 | A? | 3 |
| Qa |  89 | 66 | 6 | 6 | 8 | ? A | 9 |
| Qa |  95 | 5A | 8 | 5 | 5 | A4 | : |
| R: |  83 | 6? | : | 5 | 6 | ?? | A |
| Lh |  : ? | 4: | 5 | 5 | 4 | A8 | 7 |
| Ue |  95 | 57 | 7 | 5 | ? | ? 9 | 9 |
| Uc |  : 3 | 59 | 5 | 3 | 5 | A9 | 5 |
| Ud |  97 | 5A | 6 | 4 | 6 | A6 | 7 |
| Qd |  94 | 5? | : | 6 | 4 | ? A | 43 |
| V c |  : 3 | 5: | 3 | 3 | 6 | A: | 3 |
| WU |  95 | 5: | : | 6 | 4 | ? A | 43 |
| I c |  93 | 5? | A | 5 | 4 | ?? | 44 |
| YU |  79 | 78 | 9 | 4 | 5 | A4 | : |
| Yc |  89 | 75 | 3 | 3 | 5 | A? | 3 |
| aX |  7: | 63 | 4: | 6 | 6 | :: | 53 |
| bR |  : ? | 4A | 5 | 3 | 4 | A: | 5 |
| bT |  77 | 77 | 8 | 5 | 8 | ?? | : |
| OR |  86 | 6A | 8 | 4 | 5 | A5 | 9 |
| bN |  : : | 49 | 6 | 6 | 4 | A6 | 9 |
| dT |  96 | 59 | 6 | 5 | 9 | ? A | 8 |






























i P93B c" xqüu ü" üt" " qwçuu " ç t ýqçuu ýx üx v' ...". ý wóçüü- u" üóGRióx" .t r u üx Nd* ó çuó' " óç çüü ü'

S ... ' ... ' ... ' ... ' ... ' ... ' ; -

| | | c" üq... qwçuu | cu" t ü' qwçuu | cu" t ü' t ýqçuu | c" üq... t ýqçuu | M" " üç" " " | c" üq... t wçuu* | c" üq... t ýqçuu* |
|------|--|----------------|----------------|------------------|------------------|--------------|------------------|-------------------|
| Nd5? | | 8? | 67 | 7 | 4 | 6 | A5 | 8 |
| KN | | 83 | 77 | 7 | 4 | 4 | A7 | 8 |
| KP | | 85 | 6: | 7 | 3 | : | ?A | 7 |
| Li | | 77 | 77 | 9 | 5 | 7 | ?? | ? |
| MT | | 99 | 59 | 6 | 5 | 6 | A5 | 8 |
| MN | | 99 | 63 | 6 | 3 | 4 | A9 | 6 |
| NN | | 83 | 75 | 5 | 4 | 8 | A5 | 6 |
| RN | | 95 | 65 | 6 | 3 | 6 | A7 | 6 |
| NU | | 98 | 65 | 4 | 3 | 5 | A: | 4 |
| Nb | | : A | 4A | 3 | 3 | 5 | A? | 3 |
| Qa | | 8: | 69 | 4 | 4 | 8 | A6 | 5 |
| Qa | | 89 | 68 | 8 | 5 | 5 | A4 | : |
| Rc | | 7: | 74 | : | 5 | 6 | ?? | A |
| Lh | | : 9 | 4? | 5 | 5 | 5 | A7 | 7 |
| Ue | | 8? | 5? | 6 | 4 | 43 | ?9 | 7 |
| Uc | | 8A | 69 | 5 | 3 | 6 | A8 | 5 |
| Ud | | 95 | 64 | 5 | 3 | 8 | A6 | 5 |
| Qd | | 86 | 68 | ? | 6 | 4 | ?? | 44 |
| Vc | | : 3 | 5: | 3 | 3 | 6 | A: | 3 |
| WU | | 95 | 64 | 7 | 5 | 4 | A6 | 9 |
| Ic | | 84 | 6? | ? | 5 | 4 | ?A | 43 |
| YU | | 76 | 79 | : | 4 | 6 | ?A | ? |
| Yc | | 84 | 79 | 3 | 3 | 6 | A: | 3 |
| aX | | 78 | 67 | 47 | 6 | 7 | : A | 4: |
| bR | | : 5 | 57 | 5 | 4 | 4 | A9 | 6 |
| bT | | 75 | 7: | 7 | 5 | 8 | ?A | 9 |
| OR | | 87 | 73 | 6 | 3 | 6 | A7 | 6 |
| bN | | ?6 | 47 | 5 | 4 | 3 | A: | 6 |
| dT | | 93 | 5A | 6 | 4 | : | ?A | 7 |

i P93 c" xqüu ü" üt" " qwçuu " ç t ýqçwçuu ýx üx v' ...". ý wóçüü- u" üGRióx" .t r u üx Nd' ó çuó' " " óç yxi ü'

S ' ' '... ' ...' ' ' ' ' ... ' ...' ' , -

| | c" üq... qwçuu | cü" t ü' qwçuu | cü" t ü' t ýqçwçuu | c" üq... t ýqçwçuu | M" " ü' ç " " | c" üq... ý wçuu* | c" üq... ýqçwçuu* |
|------|---|----------------|--------------------|--------------------|---------------|------------------|-------------------|
| Nd5? |  89 | 66 | 9 | 5 | 6 | ? A | ? |
| KN |  7: | 78 | 9 | 4 | 4 | A5 | : |
| KP |  87 | 6: | 6 | 4 | 8 | A4 | 7 |
| Li |  79 | 76 | ? | 4 | 5 | ? A | A |
| MT |  87 | 5A | 43 | 7 | 6 | ? 6 | 47 |
| MN |  96 | 63 | 8 | 4 | 4 | A6 | 9 |
| NN |  7A | 74 | 7 | 5 | 7 | A3 | 9 |
| RN |  94 | 66 | 6 | 3 | 6 | A7 | 6 |
| NU |  9? | 5A | 5 | 3 | 4 | A: | 5 |
| Nb |  :: | 53 | 4 | 3 | 5 | A: | 4 |
| Qa |  89 | 67 | 7 | 4 | 8 | A3 | 8 |
| Qa |  89 | 67 | 8 | 6 | 5 | A3 | ? |
| R: |  79 | 75 | ? | 5 | 5 | ?? | 43 |
| Lh |  : ? | 4? | 4 | 4 | 5 | A9 | 5 |
| Ue |  94 | 59 | 6 | 4 | A | ?: | 7 |
| Uc |  97 | 64 | 5 | 3 | 6 | A8 | 5 |
| Ud |  95 | 5A | 6 | 4 | 8 | A4 | 7 |
| Qd |  86 | 66 | A | 7 | 4 | ? 9 | 46 |
| V c |  99 | 5? | 4 | 5 | 6 | A7 | 6 |
| WU |  86 | 5A | 45 | 8 | 4 | ? 5 | 4: |
| I c |  86 | 68 | A | 5 | 4 | ?? | 44 |
| YU |  79 | 77 | : | 4 | 5 | A3 | ? |
| Yc |  84 | 78 | 3 | 3 | 7 | A9 | 3 |
| aX |  75 | 69 | 49 | 6 | 6 | : ? | 4A |
| bR |  : ? | 53 | 5 | 3 | 3 | A? | 5 |
| bT |  75 | 7? | 6 | 5 | 8 | A3 | 8 |
| OR |  78 | 74 | 43 | 5 | 5 | ? 9 | 45 |
| bN |  8A | 5A | ? | 6 | 4 | ?? | 44 |
| dT |  8A | 5? | 7 | 5 | : | ?: | 9 |

i P93 c" xqūu ū' ūt" " qwqūu " ζ t yóqūu xū ūu v' ...". y' wóqūū- u' ūGRiόx" .t r u ūu Nd' ó qūó' " " óy yxi ū'

l ' 2Sn' ' ' ' ... ' ' ' , -

| | | c" ūq... qwqūu | cū' t ū' qwqūu | cū' t ū' t yóqūu | c" ūq... t yóqūu | M' " ū' o' " | c" ūq...! wqūu* | c" ūq...! yóqūu* |
|------|--|----------------|----------------|------------------|------------------|--------------|-----------------|------------------|
| Nd5? | | 7: | 6: | A | 6 | 7 | ? 7 | 45 |
| KN | | 68 | 7? | 45 | 7 | 4 | ? 6 | 49 |
| KP | | 78 | 67 | ? | 6 | 43 | : A | 44 |
| Li | | 6? | 76 | 44 | 7 | 7 | ? 4 | 48 |
| MT | | 78 | 65 | 46 | 9 | 7 | : : | 4A |
| MN | | 83 | 68 | A | 7 | 5 | ? 8 | 46 |
| NN | | 66 | 75 | 45 | : | 9 | : 8 | 4A |
| RN | | 85 | 6: | 8 | 5 | 7 | ? A | : |
| NU | | 85 | 6? | 9 | 4 | 6 | A3 | : |
| Nb | | : 7 | 53 | 5 | 4 | 6 | A7 | 6 |
| Qa | | 75 | 6? | A | 7 | : | ? 3 | 46 |
| Qa | | 7A | 6? | ? | 5 | 6 | ? : | 43 |
| Rt | | 6? | 77 | 44 | 6 | 7 | ? 5 | 47 |
| Lh | | 9: | 56 | 7 | 5 | 7 | A3 | 9 |
| Ue | | 7? | 5A | A | 7 | 43 | : : | 46 |
| Uc | | 88 | 66 | : | 5 | 6 | ?? | A |
| Ud | | 79 | 6: | A | 6 | 8 | ? 6 | 45 |
| Qd | | 73 | 6: | 49 | 8 | 5 | : : | 54 |
| Vc | | 9: | 5A | 3 | 4 | 6 | A9 | 4 |
| WU | | 74 | 66 | 48 | ? | 6 | : 7 | 56 |
| Ic | | 6A | 73 | 47 | 8 | 5 | : A | 4A |
| YU | | 73 | 78 | 43 | 5 | 6 | ? 8 | 45 |
| Yc | | 77 | 78 | 9 | 3 | 8 | ? A | 9 |
| aX | | 73 | 6: | 49 | 6 | 7 | : : | 4A |
| bR | | : 4 | 58 | 6 | 4 | 3 | A9 | 7 |
| bT | | 6? | 79 | 8 | 6 | ? | ? 7 | ? |
| OR | | 68 | 73 | 4: | 8 | 6 | : 8 | 55 |
| bN | | 86 | 66 | ? | 7 | 5 | ? 9 | 45 |
| dT | | 83 | 67 | : | 5 | : | ? 7 | A |

i P? 3 c" xqüu ü" üt" " qwçuu " ç t ýqçuu ýx üx v' ... ý wóçüü- u" üGRióx" .t r u üx Nd' ó çuó' " " óç çxi ü'

0 % ' , -






























| | | c" üq... qwçuu | cu" t ü' qwçuu | cu" t ü' t ýqçuu | c" üq... t ýqçuu | M' " üç" " " | c" üq... ýqçuu* | c" üq... ýqçuu* |
|------|--|----------------|----------------|------------------|------------------|--------------|-----------------|-----------------|
| Nd5? | | 89 | 67 | 8 | 4 | 7 | A3 | 9 |
| KN | | 86 | 75 | 7 | 4 | 3 | A8 | 8 |
| KP | | 94 | 64 | 6 | 4 | 7 | A5 | 7 |
| Li | | 84 | 6: | ? | 4 | 6 | ?? | A |
| MT | | 85 | 67 | 9 | 7 | 7 | ? 9 | 43 |
| MN | | 93 | 66 | 7 | 4 | 5 | A6 | 8 |
| NN | | 76 | 76 | 7 | 4 | A | ? 9 | 8 |
| RN | | 95 | 67 | 6 | 3 | 4 | A9 | 6 |
| NU | | : 6 | 58 | 4 | 3 | 4 | A? | 4 |
| Nb | | : A | 4? | 4 | 3 | 5 | A: | 4 |
| Qa | | 8? | 66 | 6 | 4 | 8 | A4 | 7 |
| Qa | | 8: | 67 | 8 | 5 | 5 | A4 | : |
| Rc | | 77 | 78 | 9 | 5 | 6 | ? A | ? |
| Lh | | :: | 4A | 5 | 3 | 5 | A9 | 5 |
| Ue | | 98 | 58 | 5 | 4 | : | A3 | 6 |
| Uc | | 98 | 64 | 5 | 3 | 5 | A9 | 5 |
| Ud | | 8? | 67 | 6 | 3 | 8 | A5 | 6 |
| Qd | | 87 | 69 | : | 5 | 4 | A3 | A |
| Vc | | 9: | 5A | 3 | 3 | 7 | A9 | 3 |
| WU | | 84 | 69 | ? | 5 | 6 | ? : | 43 |
| Ic | | 85 | 69 | A | 5 | 4 | ?? | 44 |
| YU | | 79 | 76 | 9 | 4 | 7 | ? A | : |
| Yc | | 93 | 6: | 4 | 3 | 5 | A: | 4 |
| aX | | 78 | 67 | 47 | 6 | 7 | : A | 4: |
| bR | | : 7 | 55 | 5 | 4 | 4 | A9 | 6 |
| bT | | 83 | 75 | 6 | 4 | 7 | A5 | 7 |
| OR | | 79 | 73 | A | 4 | 7 | ? 9 | 43 |
| bN | | 79 | 6? | A | 7 | 6 | ? 7 | 46 |
| dT | | 87 | 65 | 8 | 5 | : | ? 9 | : |

i P? B c" xqüu ü"üt" " qwçuu "ç t ýqçuu ýx üx v' ...". ý wóçüü- u"üGRióx" .t r u üx Nd'ó çuó' "óç ýçü ü'

T... ... ')' ' ' ' '... ' ' , -

| | | c"üç... qwçuu | cü"t ü' qwçuu | cü"t ü' t ýqçuu | c"üç... t ýqçuu | M" "ü"ç"ç" | c"üç...! wçuu* | c"üç...!Móçwçuu* |
|------|--|---------------|---------------|-----------------|-----------------|------------|----------------|------------------|
| Nd5? | | 83 | 6: | : | 5 | 7 | ?: | A |
| KN | | 7A | 75 | : | 4 | 4 | A4 | ? |
| KP | | 93 | 66 | 5 | 4 | 7 | A6 | 6 |
| Li | | 88 | 69 | 9 | 4 | 5 | A4 | : |
| MT | | 79 | 63 | 45 | : | 8 | : 9 | 4A |
| MN | | 87 | 6: | 9 | 4 | 5 | A4 | : |
| NN | | 84 | 6A | 7 | 4 | 8 | A3 | 8 |
| RN | | 8A | 69 | 6 | 3 | 5 | A8 | 6 |
| NU | | 96 | 67 | 4 | 3 | 5 | A: | 4 |
| Nb | | : 7 | 54 | 4 | 3 | 7 | A8 | 4 |
| Qa | | 77 | 74 | : | 5 | 9 | ? 8 | A |
| Qa | | 84 | 6? | 9 | 5 | 6 | ? A | ? |
| Rt | | 75 | 77 | A | 4 | 7 | ? 9 | 43 |
| Lh | | : 8 | 53 | 5 | 5 | 4 | A8 | 7 |
| Ue | | 95 | 5? | 6 | 4 | 9 | A3 | 7 |
| Uc | | 96 | 66 | 4 | 3 | 6 | A9 | 4 |
| Ud | | 7? | 75 | 7 | 4 | 8 | A3 | 8 |
| Qd | | 77 | 76 | ? | 6 | 5 | ?: | 44 |
| Vc | | * 97 | 64 | 3 | 3 | 8 | A8 | 3 |
| WU | | 73 | 6: | 47 | : | 5 | :: | 54 |
| Ic | | 77 | 6A | 45 | 6 | 5 | ? 6 | 48 |
| YU | | 78 | 79 | 9 | 3 | 6 | A4 | 9 |
| Yc | | 85 | 77 | 4 | 3 | 6 | A9 | 4 |
| aX | | 74 | 67 | 4: | 7 | 7 | : 8 | 54 |
| bR | | : 6 | 55 | 6 | 4 | 4 | A8 | 7 |
| bT | | 79 | 79 | 6 | 4 | 7 | A5 | 7 |
| OR | | 74 | 77 | 43 | 5 | 6 | ? 8 | 45 |
| bN | | 7? | 65 | 46 | 8 | 5 | ? 3 | 4? |
| dT | | 79 | 6? | 8 | 5 | A | ? 7 | : |






























i PA M' " çus" w' ýóu üxu v' ý w.qru.G

| | huó/q't " o" " xqüýíóüq" tó v' ç | huó/r ü " t " "ü"o" " xqüýíóüq" tó v' ç | W' / " xqçüü " uóüç óüü" ýü | M' " ü"ü"o" " | c" üq..çaus" w' ýóu üxpó .qr u..* |
|------|---|---|-----------------------------|---------------|-----------------------------------|
| Nd5? |  : A | 47 | : | 3 | A6 |
| KN |  ?7 | 43 | 9 | 3 | A7 |
| KP |  : 3 | 4: | 45 | 4 | ? : |
| Li |  : A | 47 | : | 3 | A6 |
| MT |  ?? | ? | 7 | 3 | A9 |
| MN |  ?? | A | 6 | 3 | A: |
| NN |  :: | 48 | ? | 3 | A5 |
| RN |  : 3 | 4A | 43 | 4 | ? A |
| NU |  9? | 4: | 48 | 3 | ? 8 |
| Nb |  : 4 | 4? | 44 | 3 | ? A |
| Qa |  ?A | ? | 6 | 3 | A: |
| Qa |  : 8 | 49 | A | 3 | A4 |
| Rc |  9: | 4A | 46 | 4 | ? 9 |
| Lh |  96 | 4A | 4? | 3 | ? 5 |
| Ue |  : 3 | 54 | A | 3 | A4 |
| Uc |  99 | 4A | 48 | 3 | ? 8 |
| Ud |  ?A | A | 5 | 3 | A? |
| Qd |  ?4 | 47 | 8 | 3 | A8 |
| Vc |  + : 4 | 49 | 46 | 3 | ? : |
| WU |  A7 | 8 | 4 | 3 | AA |
| Ic |  : A | 47 | 9 | 4 | A6 |
| YU |  : 9 | 48 | ? | 4 | A4 |
| Yc |  ?4 | 44 | ? | 3 | A5 |
| aX |  93 | 59 | 47 | 3 | ? 9 |
| bR |  ?5 | 46 | 8 | 3 | A8 |
| bT |  : 7 | 4: | A | 3 | A4 |
| OR |  ?3 | 48 | 8 | 3 | A8 |
| bN |  : 8 | 4A | 8 | 4 | A7 |
| dT |  :: | 49 | : | 3 | A6 |

i PB M' " °" x" ýó çuó' " " óy .u v' ç üxýó .qru.G

| | | cxu +W cRXW URh, w' %aç" – u" ü | cxu N ζ' , uq" d" ý " | cxu ý t óüç / ' çy%üü r óy uóúó | L" " ó – uç" çaq" ýaqüý " ó | M" " ü " ° " |
|------|--|---------------------------------|-----------------------|---------------------------------|-----------------------------|--------------|
| Nd5? | | A | 83 | A | 44 | 54 |
| KN | | A | 9: | 9 | 44 | : |
| KP | | 7 | 7A | A | 9 | 65 |
| Li | | 45 | 7: | 49 | 44 | 47 |
| MT | | 9 | 83 | 7 | 49 | 57 |
| MN | | 43 | 77 | 44 | 4: | 4? |
| NN | | 5 | 5? | 68 | ? | 5: |
| RN | | 43 | 8A | ? | : | 49 |
| NU | | 7 | 8A | 46 | 5 | 55 |
| Nb | | : | 89 | 8 | 6 | 5A |
| Qa | | 43 | 78 | 7 | 4: | 57 |
| Qa | | : | 8A | 46 | : | 47 |
| R | | : | 8? | 44 | 9 | 4? |
| Lh | | 5 | : 4 | : | 4 | 4A |
| Ue | | 5 | 85 | 43 | ? | 5? |
| Uc | | 9 | 78 | 54 | : | 54 |
| Ud | | : | 98 | 6 | ? | 4: |
| Qd | | 43 | 74 | 44 | 57 | 47 |
| Vc | | : | 7A | 47 | A | 54 |
| WU | | 4: | 74 | : | 48 | 53 |
| I c | | 48 | 78 | 43 | 48 | 48 |
| YU | | ? | 83 | 43 | 43 | 55 |
| Yc | | 7 | 84 | 9 | 7 | 68 |
| aX | | ? | 7: | 47 | 44 | 53 |
| bR | | 9 | 85 | 46 | 48 | 47 |
| bT | | 44 | 77 | 4? | 46 | 47 |
| OR | | 6 | 8: | 45 | 45 | 49 |
| bN | | 6 | 7? | 9 | 4: | 59 |
| dT | | 49 | 7? | 7 | 9 | 59 |

i PC Mx' üxu Nd u' uq'w .qr u..xq%bi q' ý v...u"su " " üxu sx" ysu " v " ζ' çsxqóu " v u.usüçç q' ' .yç" suó
 -ççx wuó/ qóçý w- qsxý uó/ t ýox qóçxuçó/ ü.u%ççý " ó ,G

| | | huó/ ýixqó xu'.ut " ' çsxqóu q – " çu u' uq'w O uuyçy'ü q' ' .yç" su/ " ç – qý çuqó" r uy wü' óq%bi – " " u | huó/ ýixqó xu'.ut " ' çsxqóu q – " çu u' uq'w O uuyçy'ü q' ' .yç" su/ " ç – qý çuqó" r uy wü' óu.usü – " çu u' u' %çç" – u' üq...Oççy' t... q' ' .yç" suó | K" üx -ü' óq%bi – " " u q" t ü' óu.usüq – " çu u' %çç" – u' üq...Oççy' t... q' ' .yç" suó, | W / ýixqó " üy v...u' sut " " ç' çsxqóu sx" ysu | M" " ü' " " " | c" üq...huó* |
|------|---|---|---|---|---|---------------|--------------|
| Nd5? |  | 5: | 4A | 66 | 4A | 5 | : A |
| KN |  | 58 | 54 | 76 | 44 | 3 | ? A |
| KP |  | 5? | 48 | 74 | 45 | 7 | ? 7 |
| Li |  | 64 | 47 | 6A | 48 | 4 | ? 7 |
| MT |  | 56 | 56 | 76 | A | 5 | ? A |
| MN |  | 5A | 56 | 69 | 44 | 4 | ?? |
| NN |  | 5? | 43 | 74 | 4A | 5 | : A |
| RN |  | 65 | 4? | 5? | 54 | 4 | : ? |
| NU |  | 53 | 47 | 78 | 53 | 4 | : A |
| Nb |  | 64 | 47 | 5A | 58 | 4 | : 7 |
| Qa |  | 65 | 49 | 68 | 48 | 5 | ? 6 |
| Qa |  | 59 | 53 | 66 | 53 | 4 | : A |
| Rc |  | 63 | 57 | 64 | 46 | 5 | ? 8 |
| Lh |  | 5? | 47 | 75 | 48 | 4 | ? 7 |
| Ue |  | 67 | A | 64 | 58 | 4 | : 7 |
| Uc |  | 5? | 43 | 68 | 59 | 4 | : 6 |
| Ud |  | 58 | 4A | 73 | 47 | 5 | ? 7 |
| Qd |  | 63 | 54 | 6? | 43 | 4 | ? A |
| Vc |  | 53 | 4: | 7A | 43 | 7 | ? 9 |
| WU |  | 49 | 55 | 74 | 4? | 6 | : A |
| I c |  | 53 | 5A | 69 | 46 | 5 | ? 8 |
| YU |  | 5: | 5: | 59 | 4: | 6 | ? 3 |
| Yc |  | 54 | 45 | 7: | 4? | 5 | ? 3 |
| aX |  | 56 | 56 | 5? | 58 | 4 | : 7 |
| bR |  | 54 | 48 | 78 | 4? | 4 | ? 4 |
| bT |  | 57 | 55 | 73 | 45 | 5 | ? 9 |
| OR |  | 54 | 53 | 64 | 5? | 3 | : 5 |
| bN |  | 47 | 59 | 63 | 5A | 4 | : 3 |
| dT |  | 59 | 48 | 54 | 68 | 6 | 95 |

i PD R " ζ' ' ý ý / xıyx " v üku v' ...". ý wu" uq'w ýó uó óx" .t üku N ζ' ' uq' d " ý " üqç. u qó q ' çý çýi " %bıç üku " u ü43 uqçóG+V l g16 l Wbf Nab,

| | | aut su " %bıç...u' uq'w s" " ó – ' üý" " ý üku Nd | N' ó çu q öıqr .u u' uq'w ó ' ' ... r t u%bıç... ý wrüüç ý vçqóç sü çu s" " " usıý" " ó ruü uu" üku Vu– ruç bıçüüó | N' ó çu üxqüü" uq'w s" " óbıç qü qó ... qó " " óóy .u | aut su Nd u' uq'w y ' ' " çıó | R' %bıçüý q" t u%bıç... ' s.uq' u' uq'w üusx" " " wıçó | N" xq" su ý üüç qıý " q..s" " , uçqıý " ý üku vıut " v u' uq'w R' üüç%ku uç ý öüç sıý" Byw " uut ut/ u ' . qıy B " Ö" çu q– .u/ r t u%bıç... ý wçı.üüç qıy%bıç ó ' ' . çıó " v wqóç ükuç u' uq'w ó" çıuó vç" – " " " QNd s" " üçüó, |
|------|--|---|--|---|-------------------------------|--|---|
| Nd5? | | 63 | 55 | 6: | 46 | 7: | 48 |
| KN | | 5? | 59 | 76 | 4? | 77 | 53 |
| KP | | 58 | 5: | 86 | 45 | 65 | 4A |
| Li | | 67 | 56 | 84 | 47 | 66 | 49 |
| MT | | 75 | 55 | 4A | 48 | 85 | 4A |
| MN | | 69 | 65 | 5A | 43 | 7: | 49 |
| NN | | 53 | 5? | 6A | ? | 7? | 45 |
| RN | | 5: | 4A | 75 | 49 | 73 | 4: |
| NU | | 57 | 59 | 89 | 4: | 85 | 47 |
| Nb | | 56 | 4? | 83 | 44 | 88 | 45 |
| Qa | | 67 | 48 | 69 | 46 | 8? | 43 |
| Qa | | 5A | 57 | 83 | 49 | 75 | 47 |
| Rç | | 5: | 54 | 67 | 4? | 75 | 4? |
| Lh | | 63 | 4A | 87 | 45 | 83 | 46 |
| Ue | | 54 | 58 | 93 | ? | 6A | 45 |
| Uc | | 59 | 56 | 8? | 43 | 7: | 45 |
| Ud | | 69 | 4: | 63 | 48 | 88 | 44 |
| Qd | | 65 | 58 | 78 | 45 | 6: | 49 |
| Vc | | 65 | 4: | 77 | 46 | 6A | 47 |
| WU | | 6: | 57 | 55 | : | 97 | 47 |
| Ic | | 69 | 58 | 64 | 5: | 6? | 54 |
| YU | | 53 | 58 | 76 | A | 64 | 55 |
| Yc | | 58 | 59 | 89 | 54 | 83 | 46 |
| aX | | 55 | 54 | 69 | 4? | 5A | 53 |
| bR | | 67 | 54 | 6? | 4: | 83 | 48 |
| bT | | 6: | 58 | 75 | 54 | 65 | 46 |
| OR | | 66 | 49 | 59 | 4? | 96 | 46 |
| bN | | 6? | 59 | 45 | 47 | 98 | 43 |
| dT | | 64 | 48 | 66 | 46 | 7A | A |

