

# [Blinded project] - STATISTA survey

Final version

## 1 Consent

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You have been invited to take part in a research project that contributes to energy transition efforts in Europe. The following survey is about your view on energy related topics. With your participation you support the Horizon Europe research project [Blinded], which is a collaboration between several stakeholders in the energy field.

You can find more information about the study and data handling within this project here [*Link to text in appendix*].

Your participation is voluntary, which means that you may end your participation at any moment you choose. The results will be evaluated completely anonymously in aggregated form. The research results that will be published will not in any way contain confidential information or personal data from or about you through which anyone can recognise you. The legal basis upon which we process your data is consent. Your responses will be treated with strict confidentiality and contribute to the success of the research project.

By signing this consent form I acknowledge the following:

- I am sufficiently informed about the research project through a separate information sheet. I take part in this research project voluntarily. There is no explicit or implicit pressure for me to take part in this research project. It is clear to me that I can end participation in this research project at any moment, without giving any reason. I do not have to answer a question if I do not wish to do so. I consent to processing my personal data gathered during the research in the way described in the information sheet. \*

YES  NO

\*If you do not accept, you will be automatically redirected to the panel page.

## 2 Screening & demographic questions

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### 1. [Gender] What is your gender?

- Female
- Male
- Non-binary / Third gender
- Prefer not to say

### 2. [Age] How old are you? \_\_\_\_\_ [choose number]

### 3a. [Region\_Germany] Where do you live?

- Baden-Württemberg
- Bayern

- Berlin
- Brandenburg
- Bremen
- Hamburg
- Hessen
- Mecklenburg-Vorpommern
- Niedersachsen
- Nordrhein-Westfalen
- Rheinland-Pfalz
- Saarland
- Sachsen
- Sachsen-Anhalt
- Schleswig-Holstein
- Thüringen

**3b. [Region\_Portugal] Where do you live?**

- Aveiro
- Beja
- Braga
- Bragança
- Castelo Branco
- Coimbra
- Évora
- Faro
- Guarda
- Leiria
- Lisbon
- Portalegra
- Porto
- Santarém
- Setúbal
- Viana do Castelo
- Vila Real
- Viseu

**3c. [Region\_Sweden] Where do you live?**

- Ångermanland
- Blekinge
- Bohuslän
- Dalarna
- Dalsland
- Gästrikland
- Gotland
- Halland
- Hälsingland
- Härjedalen

- Jämtland
- Lappland
- Medelpad
- Närke
- Norrbotten
- Öland
- Östergötland
- Skåne
- Småland
- Södermanland
- Uppland
- Värmland
- Västerbotten
- Västergötland
- Västmanland

**3d. [Region\_Poland] Where do you live?**

- Greater Poland
- Świętokrzyskie/ Holy Cross Province
- Kuyavia-Pomerania
- Lesser Poland
- Łódź
- Lower Silesia
- Lublin
- Lubusz
- Masovia
- Opole
- Podlaskie
- Pomerania
- Silesia
- Subcarpathia
- Warmia-Masuria
- West Pomerania

**4. [Education] What is the highest level of education you have completed?**

- No formal education
- Basic education / primary school
- Secondary education (no permission to go to university)
- Further education (permission to go to university)
- Technical / vocational education
- Bachelor's degree or equivalent
- Master's degree or equivalent
- Doctoral degree or equivalent

**5. [Employment] Which of the following categories best describes your current employment status?**

- Student (school/university)

- Trainee/apprentice
- Full-time employed
- Part-time employed
- Self-employed / freelancer
- Maternal leave, parental leave
- Retired
- Unemployed
- Not able to work due to illness or disability
- Other

**6. How many people - including yourself and all children - permanently live in your household?**

- 1 person
- 2 people
- 3 people
- 4 people
- 5 people or more

**7. How many children and teenagers below 14 years of age permanently live in your household, no matter if they are your natural children or not?**

- No children
- 1 child
- 2 children
- 3 children
- 4 children
- 5 children or more

**8a. [Income\_Germany] How high is the monthly net income of your household at its disposal (after tax and contribution)?**

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Prefer not to say

**8b. [Income\_Portugal] How high is the monthly gross income of your household at its disposal (before tax and contribution)?**

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Prefer not to say

**8c. [Income\_Sweden] How high is the monthly gross income of your household at its disposal (before tax and contribution)?**

- Category 1

- Category 2
- Category 3
- Category 4
- Category 5
- Prefer not to say

**8d. [Income\_Poland] How high is the monthly net income of your household at its disposal (after tax and contribution)?**

- Category 1
- Category 2
- Category 3
- Category 4
- Category 5
- Prefer not to say

### 3 Attitudes and Behaviour

This survey is about energy consumption. First, we would like to learn more about your opinion and attitudes regarding this topic in general.

**9. To what extent do you agree with the following statements about your interest in energy topics?**

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Interest in energy</b>						
<b>1</b>	I care about the amount of energy that my household uses.					
<b>2</b>	I find it important to be up to date with the latest energy-related (global) news.					

**10. To what extent do you agree with the following statements about climate change?**

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Attitudes towards climate change</b>						
<b>1</b>	I am concerned about global climate change.					
<b>2</b>	I am concerned about the impact of energy production and consumption on climate change.					
<b>Assumptions about personal responsibility</b>						
<b>3</b>	I believe that the way my household uses energy has an impact on the climate crisis.					

**11. How important do you rate the following aspects in your decision making about energy-related topics in your household?** These can be decisions about the selection of an energy supplier, purchase of devices, participating in energy initiatives etc.

		Not at all important	Not very important	Neutral	Quite important	Very important
<b>1</b>	<b>Financial aspects</b> (e.g., costs, subsidies)					
<b>2</b>	<b>Technical aspects</b> (e.g., efficiency, technical options)					
<b>3</b>	<b>Environmental aspects</b> (e.g., (reduced) greenhouse gas emissions)					
<b>4</b>	<b>Installation efforts</b> (e.g., effort needed to install the service or technology, available help)					
<b>5</b>	<b>Usage efforts</b> (e.g., patterns of use, time)					
<b>6</b>	<b>Privacy and data security</b> (e.g., how your energy data will be used, who can see your data)					

<b>7</b>	<b>Local social impact</b> (e.g., pros and cons for your neighbourhood, beyond your own household)					
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**Are there any other aspects important in your decision making that are not listed above?  
Please specify.**

\_\_\_\_\_ *[open question]*

**12. Are you aware of the current energy expenses of your household?**

- Yes
- No
- Not sure

**13. Are you actively trying to save energy in your everyday life** (e.g., lowering the thermostat, switching off electronic devices, installing new energy saving appliances)?

- Yes, often
- Yes, sometimes
- No, never or almost never

**14. [Filter if ‘yes, often’ or ‘yes, sometimes’ in question 14] Which of the following methods are you using to save energy? Tick all that apply.**

- Lowering the thermostat
- Switching off electronic devices
- Installing new energy saving appliances
- Using energy at off-peak times
- Changing energy supplier
- None of the above

**15. Which of the following devices are installed/ are you using in your household? Tick all that apply.**

- Solar panel
- Heat pump
- Smart meter
- Smartphone app that shows your energy consumption
- Electric vehicle
- Smart electric vehicle charging stations
- None of the above

## 4 Technologies and data

### 4.1 Digital technologies in the household

The next couple of questions are about digital technologies in general, and the usage of digital technologies to manage energy in your household.

16. This question is about digital technologies in general (e.g., smart phones, electronics). To what extent do you agree with the following statements?

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Digital technologies</b>						
1	I am excited about the possibilities offered by new digital technologies.					
2	I often use new digital technologies earlier than my friends and neighbours.					
3	I often use apps on my mobile phone for services (e.g., mobility (Uber, taxi), food delivery, grocery delivery).					

17. This question is about digital technologies used for energy purposes (e.g., smart thermostat, smart EV charging). To what extent do you agree with the following statements?

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Attitude</b>						
1	I am excited about the possibilities offered by new digital <u>energy</u> technologies (e.g., smart thermostat, smart EV charging).					
<b>Cognitive</b>						
2	I want to better understand how I can use digital <u>energy</u> technologies in my household.					
<b>Behaviour</b>						
3	I actively use digital <u>energy</u> technologies in my household.					



## 4.2 Household energy data

### 4.2.1 Availability and usage of data

The following questions are about energy data. Digital technologies can provide insights into your household energy data, which includes for example the amount of your energy consumption over time.

**18. Please indicate to what extent you agree with the following statements about your energy data?**

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Attitudes towards energy data</b>						
<b>1</b>	I believe that sharing my energy data with professional energy actors can make energy systems more resilient.					
<b>2</b>	I want to learn more about what energy data can do for me.					
<b>Understanding of energy data</b>						
<b>3</b>	I know how energy data help me optimize my energy consumption.					
<b>Behaviour with energy data</b>						
<b>4</b>	I actively use my energy data to decide about my energy usage.					

**19. This question is about your real-time energy consumption data, which is data about your energy consumption that is always up to date. This is different to data that is available at the end of the month or quarter.**

**Please answer for each item: Do you have access to real-time energy data? If not, would you be interested in real-time energy data?**

		Yes, data is available	Data is not available, but I am interested	Data is not available, and I am <u>not</u> interested	I don't know
<b>1</b>	<b>Energy consumption</b> – amount of energy consumed by household				
<b>2</b>	<b>Energy price</b> – euros per kWh				
<b>3</b>	<b>Greenhouse gas emissions</b> – greenhouse gas (e.g., CO <sub>2</sub> ) per kWh				

#### 4.2.2 Privacy and security of energy data

**20. Next, we ask you to indicate to what extent you agree with the following statements about the security of your energy data?**

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Attitudes towards energy data protection</b>						
<b>1</b>	I am worried about misuse of the data about my energy consumption patterns.					
<b>2</b>	I am interested in how the privacy of my energy data is protected.					
<b>Understanding of energy data protection</b>						
<b>3</b>	I understand to what extent the privacy of my energy data is protected.					
<b>4</b>	I understand who is responsible for protecting the privacy of the energy data of my household.					
<b>5</b>	I am familiar with my rights regarding the General Data Protection Regulation (GDPR, European law for processing personal data).					

## 5 Application of technologies and data

**In the following we would like to present two concepts. After each concept, we would like to know your opinion about it.**

### 5.1 Increasing grid flexibility through demand response

Our power grids receive increasingly more electricity generated by renewable sources, like wind and solar. However, the sun does not always shine, and the wind does not always blow. To manage this intermittent supply of renewable energy, actors aim to increase grid flexibility through demand response. Demand response is the voluntary reduction or shift of electricity use by customers. This can be done automated, or actively controlled by users.

**21. Now that we have introduced the concepts of demand response and grid flexibility, we ask you: to what extent you agree with the following statements?**

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Attitude</b>						
<b>1</b>	I believe households can contribute to a better balance of energy supply and demand.					
<b>2</b>	I am willing to provide automated demand response, if this helps to make our electricity grids more stable and sustainable.					

3	I want to learn more about how my household can make the grid more flexible.					
<b>Cognitive</b>						
4	I understand how digital technologies in households (e.g., smart EV chargers, smart meters, smart appliances) can make the grid more flexible.					
5	I understand how I can use data about my energy consumption to flexibly shift my energy consumption.					
<b>Behavioural</b>						
7	I use digital technologies to provide automated demand flexibility.					
8	I actively shift my energy use based on my available energy consumption data.					

22. [FILTER: only if 'strongly disagree' or 'disagree' in previous question 21.2 I am willing to provide automated demand response (...)] **What are your main reasons for not being willing to provide automated demand response? Tick all that apply.**

- I don't have adequate devices to provide automated demand flexibility
- I want to keep control over my energy usage
- I don't understand how I can provide automated demand flexibility
- I am afraid I cannot use my appliances when I want
- It is not my responsibility to provide demand response
- I don't think that it will be beneficial for me
- My demand response will not make a difference
- I am afraid about my data security
- Other, please specify: .....[open question]

## 5.2 Energy communities

Now, we want to introduce the concept of energy communities to you and ask you afterwards some questions about it. Energy communities organise collective and citizen-driven energy actions. For example: energy communities can locally produce solar or wind energy that is shared among local households, or they collectively manage a neighbourhood battery.

23. **After we introduced this concept to you, do you know of any energy community in your city/village/neighbourhood?**

- Yes
- No
- Not sure

24. **Filter after previous question:**

- a. **[Only if question 23 "yes"] Is your household involved in an energy community?**
- No, I am not interested.
  - No, but I am interested.
  - Yes, I am involved as a member in the energy community, without having management responsibilities in the energy community.

- Yes, I am actively involved in the energy community, including management tasks.
- b. **[Only if question 23 “no” OR “not sure”]** If there would be an energy community in your neighbourhood, would you be interested in being involved?
- No, I would not be interested.
  - Yes, I would be interested in becoming a member of an energy community, without having management responsibilities in the energy community.
  - Yes, I would be interested in being actively involved in an energy community, including management tasks and setting up the energy community.
25. **[filter: only if question 24a ‘no, I am not interested’ OR 24b “No, I would not be interested”]** What are your main reasons for not being interested in joining an energy community? *Tick all that apply.*
- I don’t understand how to join an energy community.
  - I find joining an energy community too expensive.
  - I find joining an energy community too time-consuming.
  - I do not think it is possible to install the required technologies in my house.
  - I do not think it would be beneficial for me to join an energy community.
  - I do not think it is my responsibility to engage in energy management.
  - Other, please specify: ..... [open box]

## 6 Learning

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The following questions are about the way you learn about energy-related topics.

26. To what extent are you interested in energy related topics?
- I am not at all interested in energy-related topics
  - I am quite interested in energy-related topics
  - I am highly interested in energy-related topics
27. **[Filter: only if question 26 “quite interested” or “highly interested”]** When do you search for information about energy-related topics?
- I search for information about energy-related topics only when there is a specific need.
  - I search for information about energy-related topics out of general interest, even when there is no specific need.
  - I don’t search for information about energy-related topics
28. **[Filter: only if question 27 one of the answers that start with “I search for information...”]** Which of the following information sources do you currently use when you want to find out about energy-related topics? *Tick all that apply.*
- Contact with others (e.g., family, friends, telephone helpdesks)
  - Courses and training events (e.g., workshops)
  - Printed resources (e.g., newspapers, books)
  - Media (e.g., TV, radio)
  - Online sources (e.g., websites, blogs)
  - Other, please specify:..... [open box]

**[Filter – if question 28 ‘contact with others’]**

**You’ve said you make contact with others when you want to find out about energy-related topics. Who do you contact? Tick all that apply.**

- Household members
- Family
- Friends
- Work colleagues
- Relevant telephone helpdesks (e.g., DSO, TSO, energy provider, technician)
- Independent energy advisors (e.g., private, voluntary sector, municipal)
- Other, please specify:..... [open box]

**[Filter – if question 28 ‘courses and training events’ Q29]**

**You’ve said you use courses and training events to find out about energy-related topics. Which type of courses or events do you use? Tick all that apply.**

- In-person workshops or training events (half a day or shorter)
- In-person courses (over half a day)
- Online workshops or training events (half a day or shorter)
- Online courses (over half a day)
- Information events (municipality, community-based)
- Other, please specify:..... [open box]

**[Filter - if question 28 ‘printed resources’]**

**You’ve said that you use printed resources to find out about energy-related topics. Which type of printed resources do you use? Tick all that apply.**

- Books/booklets
- Magazines/journals
- Flyers/leaflets
- Newspapers
- Other, please specify:..... [open box]

**[Filter – if question 28 ‘media resources’]**

**You’ve said that you use media resources to find out about energy-related topics. Which type of media resources do you use? [tick all that apply]**

- TV programmes
- Radio programmes
- Other, please specify:..... [open box]

**[Filter – if question 28 ‘online sources’]**

**You’ve said that you use online sources to find out about energy-related topics. Which online sources do you use? Tick all that apply.**

- Websites of related organizations (TSO, DSO, municipality, local initiative, energy provider, technician, etc.)
- Online discussion forums
- News sites
- Video platforms (e.g., YouTube)
- Search engines (e.g., Google)
- Podcasts
- Interactive demonstrations
- Blogs

- Social media/social networking (e.g., Facebook, Twitter, Mastodon)
- E-books
- Apps
- Other, please specify:..... [open box]

29. **[Filter: only if question 26 answered with 'quite interested' or 'highly interested']** Which methods would you prefer for learning about a new energy-related topic in the future? *Tick all that apply.*

**Independent study**

- Text-based resources (online)
- Text-based resources (physical, on paper)
- Videos
- Audio resources/podcasts
- Online games
- App-based learning
- Visiting best practice demo sites

**Guided study**

- One-off, tutor-led workshops/training events (online)
- One-off, tutor-led workshops/events (physical/offline)
- Tutor-led course comprising multiple workshops (online)
- Tutor-led course comprising multiple workshops (physical/offline)

**Other**

- Other, please specify: ..... [open box]

30. **[Filter: only if question 26 'quite interested' or 'highly interested']** What social media channels would you prefer to use when you want to know more about energy-related topics? *Tick all that apply.*

- Facebook
- Twitter
- LinkedIn
- Instagram
- Mastodon
- YouTube
- Other, please specify:..... [open box]
- I do not want to use social media to know more about energy

31. **[Filter: only if question 26 'quite interested' or 'highly interested']** When learning about a new topic, how important do you rate social interaction with other learners?

- Very important
- Important
- Neutral
- Not important
- Not important at all

32. **[Filter: only if question 26 'quite interested' or 'highly interested']** What barriers to learning about energy-related topic have you encountered to date? *Tick all that apply.*

- Being unable to find resources/information on topics I'm interested in.
- Resources/information not being available in my language.
- Accessibility-related barriers.
- Resources/information being overly technical
- Resources/information not being sufficiently detailed
- Costs
- Lack of time to study/search for information.
- A lack of in-person events in my area.
- Other, please specify:.....
- I do not have encountered any barriers.

33. **[Filter: only if question 26 'quite interested' or 'highly interested']** Which energy-related topics would you be particularly interested in learning more about? Please give details.

..... [open box]

## 7 Background information

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Lastly, we would like to ask you a few questions about yourself.

34. **What is your current living situation (main residence)?**

- I live in a rented apartment
- I live in a rented house
- I live in my own apartment
- I live in my own house
- Other

35. **Who is involved in the decision making about energy in your household?**

**This includes for example decisions about the energy contract, and installations and technologies in the household, contributing to an energy community. Tick all that apply.**

- Myself
- Other household member(s)
- Other people outside the household (family, friends, advisors)

36. **Who pays the energy bills in your household?**

- I pay the full bill
- The bill is split among household members, including me
- Other household member(s) pay(s), I do not pay
- Someone outside the household pays
- Other

37. **Thank you very much for your participation! We would like to give you the opportunity to receive the study results. If you wish, you can leave your mail address in a separate survey for this purpose. We will only contact you to inform you about the research results. Your answers**

**to the survey cannot be linked to your mail address as this is collected separately from the answers.**

**Do you want to receive information about the study results?**

- Yes
- No

*If Q38 'yes'=> link to other form to leave your mail address.*



## Appendix: information sheet for research project [Blinded]

*This part should be put in a separate sheet and linked to the consent part.*

### **Information sheet for research project [Blinded]**

#### **1. Purpose of the research**

The research project is a collaboration between [Blinded] (Horizon Europe project) consortium members. The purpose of this research project is to develop learning material to enable all stakeholders, including citizens, to take up their role in the transition towards a more sustainable energy system. The survey creates insights on citizen perspectives, by answering the following research questions:

- How do European citizens understand energy?
- What would European citizens like to understand about energy?
- How would European citizens like to learn about energy?

#### **2. Controller in the sense of the GDPR**

[Blinded] consortium members are responsible for processing your personal data within the scope of the research.

#### **3. Potential risks and inconveniences**

Your participation in this research project does not involve any physical, legal, or economic risks. You do not have to answer questions which you do not wish to answer. Your participation is voluntary. This means that you may end your participation at any moment you choose by letting the researcher know this. You do not have to explain why you decided to end your participation in the research project.

#### **4. Withdrawing your consent and contact details**

Participation in this research project is entirely voluntary. You may end your participation in the research project at any moment, or withdraw your consent to using your data for the research, without specifying any reason. Ending your participation will have no disadvantageous consequences for you.

If you decide to end your participation during the research, the data which you already provided up to the moment of withdrawal of your consent will be used in the research.

You may of course always contact researcher [blinded], if you have any questions, or you can discuss this information with people you know.

#### **5. Legal ground for processing your personal data**

The legal basis upon which we process your data is consent.

#### **6. What personal data from you do we gather and process?**

Within the framework of the research project we process the following personal data:

Category	Personal data
<i>Demographics</i>	<i>Gender, age</i>
<i>Socioeconomic</i>	<i>Education, employment, Income, composition of household, rented/owned apartment/house</i>

Within the framework of the research project your personal data will be shared among the [blinded] consortium members.

We would like to give you the opportunity to receive the study results and if you wish, you can leave your mail address in a separate survey for this purpose. We will only contact you to inform you about the

research results. Your answers to the survey cannot be linked to your mail address as this is collected separately from the answers. Your mail address will only be processed by Statista, and will not be shared with [blinded] consortium members.

## **7. Confidentiality of data**

We will do everything we can to protect your privacy as best as possible. The research results that will be published will not in any way contain confidential information or personal data from or about you through which anyone can recognise you, unless in our consent form you have explicitly given your consent for mentioning your name, for example in a quote.

The personal data that were gathered via this survey and other documents within the framework of this research project, will be stored on storage facilities that are supported by the ICT service of consortium members.

The raw and processed research data will be retained for a period of 10 years. Ultimately after expiration of this time period the data will be either deleted or anonymised so that it can no longer be connected to an individual person. The research data will, if necessary (e.g., for a check on scientific integrity) and only in anonymous form be made available to persons outside the research group.

This research project was assessed and approved on [date] by the ethical review committee of [Blinded] University.