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# SOCIAL SUSTAINABILITY BAROMETER FOR THE GERMAN ENERGIEWENDE 2017

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Core statements and summary of the key findings

The long version of the study, with a detailed explanation of the research design, can be downloaded from January 2018 at [www.iass-potsdam.de](http://www.iass-potsdam.de) • [www.dynamis-online.de](http://www.dynamis-online.de)

## PREFACE

The German energy transition (Energiewende) is the subject of intensive research, and thankfully so. We now have reliable estimates relating to the required deployment of technology, the costs for end consumers and society, and the expected consequences for health and the environment. It has been firmly established just how much CO<sub>2</sub> we have already saved with the energy transition, and what is required in order to reduce CO<sub>2</sub> emissions even further. There is also a range of scientific studies on the impact of the expansion of renewable energies on nature conservation and species protection.

However, one question has received little academic attention to date: How does the energy transition affect society? It is astonishing that we know so little about this. After all, experts have long been agreed on the fact that sustainability does not just have an economic and ecological dimension, but also a social one. It is essential that we consider the social impact to the same extent as the economic or ecological effects. So it is high time to give the question of social sustainability a solid empirical base. The Institute for Advanced Sustainability Studies (IASS), together with the RWI – Leibniz Institute for Economic Research, conducted a panel survey of more than 7,500 households. Now, with the Social Sustainability Barometer for the German Energiewende 2017, we present the results for the first time.

This much is clear: The results are remarkable. And they will cause a stir – and rightly so. Because all is not well when it comes to the social sustainability of the Energiewende. While there is overwhelming support for the energy transition as an idea and a goal, people are dissatisfied with the manner in which it is being carried out. To summarise: They want the energy transition to be a joint effort by all parts of society. Yet they feel that in many respects this political promise is not being fulfilled. Across all income brackets, people want more participation and a greater say, while some would like the opportunity to become more directly involved in the process. People want fairer solutions for financing the energy transition. They are realistic and far-sighted about the opportunities and problems it presents. And in relation to many different questions they are more ambitious and courageous than politicians seem to assume.

Our barometer shows that an energy transition conducted without the involvement of the people has no future in Germany. All the more reason to hope that the findings of the barometer will be considered in political discussions of the energy transition, and that policy-makers will draw the right conclusions from them. But take a look yourself at the fascinating results, which we have summarised for you in this brochure.

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And we do not intend to leave it at that. Our survey is called the Social Sustainability Barometer for the German Energiewende because we aim to measure and report on it annually. We are developing a time series that will help to detect positive and negative trends at an early stage.

We would like to emphasise that dynamis - the cooperative framework within which the IASS conducted the survey - sees itself as a think-do-rethink tank. In other words, we not only point to the deficits revealed by the barometer regarding the social sustainability of the Energiewende. We also want to find out how we can im-

prove things in the social reality. To this end we have developed living labs - for example in the Anhalt and Ruhr regions - where we test ways and means to achieve a greater social sustainability for the energy transition. With no specific expectations, but always focused on people and the consumer. We hope to bring our findings to bear in the political debate on the energy transition.

We would welcome a dialogue with you on this topic. But first of all, we would invite you to sit back and enjoy reading this stimulating report!



Prof. Dr Ortwin Renn



Dr René Mono



Dr Stephan Muschick

## THE SOCIAL SUSTAINABILITY BAROMETER FOR THE GERMAN ENERGIEWENDE

The energy transition is both an opportunity and a challenge for society. The transformation of the energy system towards energy efficiency, energy saving and renewable energies raises fundamental questions with regard to designing the future, which affect many areas of life: from housing and the domestic sphere to work, mobility, consumption and leisure time. In many of these areas, political decisions are imminent that could have a significant effect on the opportunities and resources of various population groups. It is therefore no surprise that social objectives such as “fairness”, “justice” and “social compatibility” are playing an increasingly important role in the struggle to find the best solutions for implementing the energy transition.

The success of the German energy transition depends on how these social sustainability objectives are handled. **Social sustainability is not merely a lubricant for gaining acceptance, but rather a positive model of a macrosocial joint task**, in which all parts of society feel involved and can play an active part in shaping their living environment.

**To date there has been no reliable knowledge base** with which to adequately gauge the attitudes, concepts of justice, and experiences of different population groups with regard to the energy transition and its associated challenges, risks and opportunities. The political debate on the energy transition has tended to focus on questions of technology and economic efficiency. Hardly anyone has conducted systematic research on how the population in Germany perceives and evaluates the

Energiewende, and how they classify their own role in the ongoing transformation. We aim to close this gap with this publication.

With the Social Sustainability Barometer for the German Energiewende we provide an **empirical database for annual monitoring** in order to be able to record developments in the social dimension of sustainability as precisely as possible. What do Germans think about the Energiewende and its current form? What shape, in their opinion, would a “fair” Energiewende take? To what extent do they feel affected by the Energiewende? How strongly do they wish to participate, and what are their expectations with regard to future developments in this transformation process?

In the first instance, the barometer describes the state of social sustainability and records the advances and setbacks in the implementation of the social dimensions of the Energiewende. In addition, the data point to existing or emerging challenges and problems. The results of the barometer identify key areas for specific action, which require appropriate political measures. It therefore serves as an “early warning system” to support political decision-making and priority-setting.

The results presented here are based on an **internet-based, population-representative household survey**, which was conducted in cooperation with the RWI – Leibniz Institute for Economic Research within the framework of the forsa.omninet household panel (the standardised questionnaire can be downloaded at [www.forsa.omninet.de](http://www.forsa.omninet.de)).

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dynamis-online.de). More than 7,500 households in Germany were surveyed. The selection was in a multistage random process. This allows us, in the framework of statistical confidence intervals, to generalise to the entire population based on the results of the sample.<sup>1</sup> In order to attain sufficient data from persons in the lower income bracket of the German residential population, the lower-income group was included disproportionately in the selection (oversampling). This was, however, always taken into account during the analysis of the data.

The Social Sustainability Barometer for the German Energiewende was conceived with a **mixed-method approach**, in which quantitative and qualitative research approaches are combined in order to be able to process research questions more comprehensively. In addition to the household surveys, structured interviews were also conducted with relevant experts, and five group discussions (so-called focus groups<sup>2</sup>) were held. The surveys are based on a thorough assessment of the scientific literature on the issue, and on an extensive discourse and stakeholder analysis of the political debate on the social dimensions of the energy transition.

This brochure presents the first findings of the Social Sustainability Barometer for the German Energiewende, which will be produced annually in future. The barometer is produced by the Institute for Advanced Sustainability Studies (IASS) within the framework of the dynamis partnership and in cooperation with the Kopernikus project ENavi. The think-do-rethink tank dynamis was founded in December 2016 by the innogy Foundation for Energy and Society, the 100 Prozent erneuerbar stiftung, and the IASS. The Kopernikus research project ENavi contributed primarily to the organisation and the evaluation of the focus groups.

**We want to express our gratitude to the supporters and sponsors** without whom our work on the Social Sustainability Barometer would not have been possible, in particular the German Federal Ministry for Education and Research (BMBF), the Kopernikus project ENavi, and the two partners in dynamis, the innogy Foundation for Energy and Society and the 100 Prozent erneuerbar stiftung. We also thank our colleagues at the IASS as well as other experts from the scientific community, politics, civil society and business, who followed the development of the barometer with keen interest and gave good advice.

The Social Sustainability Barometer for the German Energiewende provides an **important knowledge base for future decision processes to shape the energy transition**. It shows where political attention is required, and where perceived deficits must be tackled politically. We hope that the results of the barometer are both an incentive and a guide to devoting greater attention to the social dimension of the energy transition alongside technical and economic questions, and to being unstinting in addressing the needs for action.

Potsdam, 5 November 2017

Daniela Setton, Ira Matuschke, Ortwin Renn

## 1 | A BROAD CONSENSUS FOR THE ENERGY TRANSITION

**88%** of the population across all education, income<sup>3</sup> and age groups – and in both rural and urban areas – support the Energiewende. Even among climate change sceptics, the Energiewende is generally undisputed, with an approval rating of **77%**.

**75%** of the population regard the Energiewende as a joint task, to which everyone in society must contribute. **70%** of lower-income households also agree with this view.

Only **3%** of the population consider the Energiewende to be wrong and do not wish to have any part in it (“Energiewende opponents”).

More than **87%** of the supporters<sup>4</sup> of the conservative CDU/CSU, the social democratic SPD, the Free Democrats (FDP), the Left Party, and Alliance 90/The Greens and **59%** of Alternative for Germany (AfD) supporters are in favour of the Energiewende.

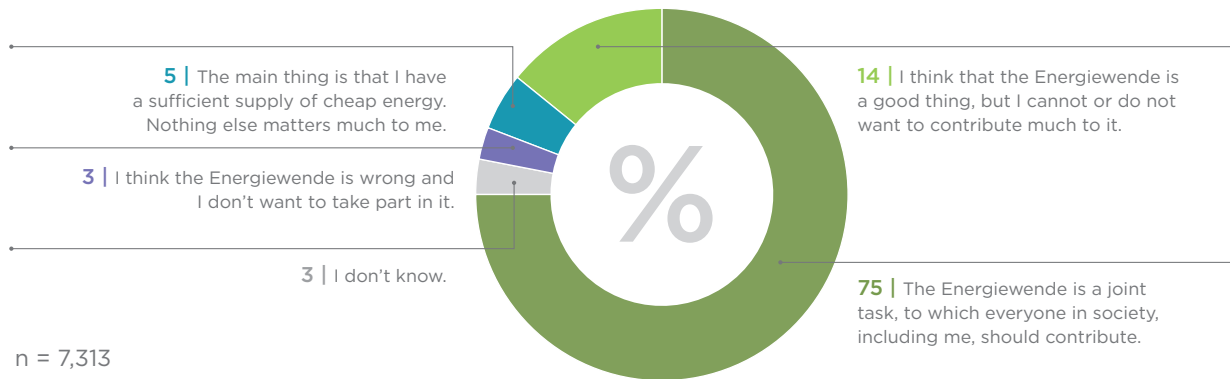
**86%** of the population welcome the fact that citizens can contribute to the energy transition by generating their own energy. That is true of all income groups in equal measure.



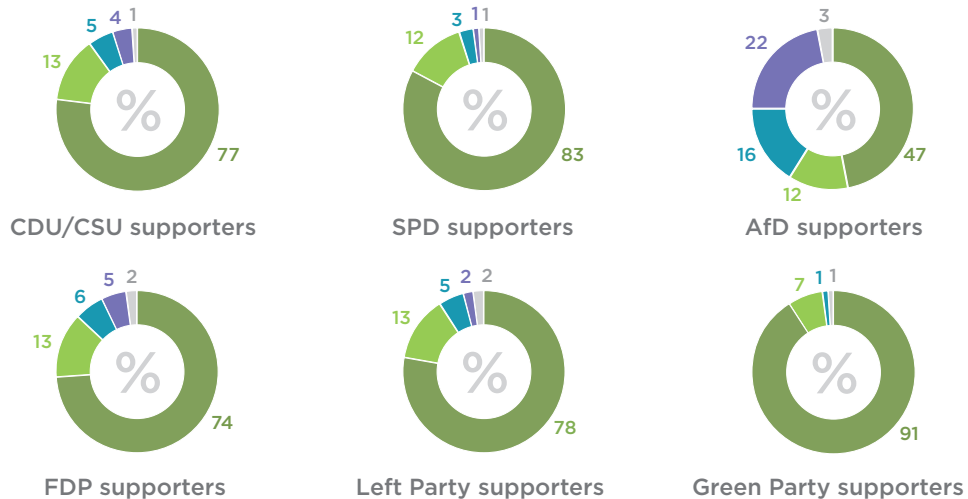
The consensus on the Energiewende is overwhelming. Especially at a time when the growing divisions in our society are a cause for concern, there is broad agreement on the energy transition in all sections of the population and across the entire political spectrum. In all social groups it is firmly anchored as an objective with positive connotations. Even in those parts of the population where a more sceptical attitude might be expected, such as lower-income households, the majority supports the energy transition. A large majority also favours the involvement of citizens in the expansion of renewable energy sources. **Politicians can therefore expect broad support for a continued, targeted implementation of the Energiewende.**



## ALL ACROSS THE POLITICAL SPECTRUM: AN OVERWHELMING MAJORITY



### From the Left Party to the AfD: broad agreement on the Energiewende



n = 4,307, households stating a party preference

## 2 | TWO THIRDS IN FAVOUR OF COAL PHASEOUT, ALMOST AS MANY AS FOR NUCLEAR PHASEOUT

All of the energy policy objectives of the Energiewende enjoy high approval ratings. The frontrunners are: increasing energy efficiency (84%), expanding renewable energies (82%), and reducing energy consumption (80%).

63% of the population support a coal phaseout, 40% strongly. Thus the coal phaseout enjoys a similarly high approval rating to the nuclear phaseout (68%, of which 53% strongly). 11% of the population reject the coal phaseout (of which 3% reject it outright). This is even fewer than the 15% who reject a nuclear phaseout.

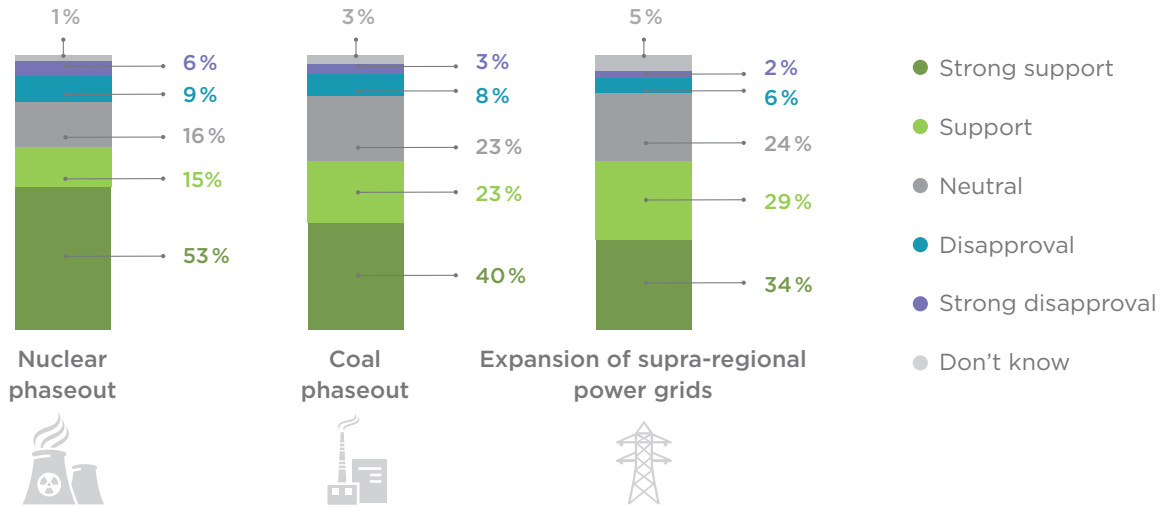
Even in the four federal states with open-cast lignite mining and lignite power plants (Brandenburg, North Rhine-Westphalia, Saxony and Saxony-Anhalt), a majority of respondents favours a coal phaseout. At 60%, support is particularly high in North Rhein-Westphalia.

63% of the population support the continued expansion of supra-regional power grids.



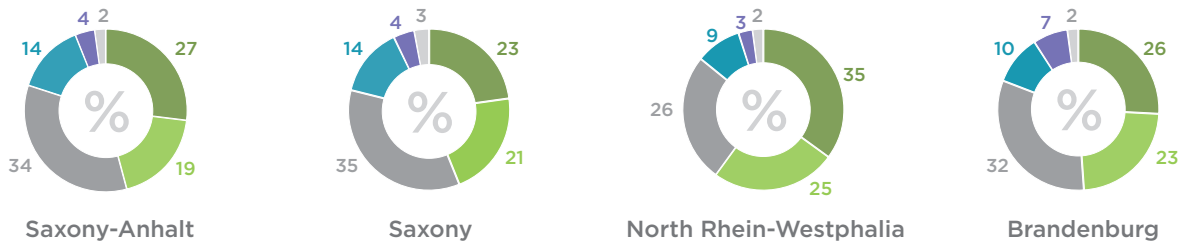
The overwhelming majority of people living in Germany do not want coal to have a future in Germany's energy supply. That is true even of those federal states where lignite plays an important role. It's clear that sustainable development options must be sought for those regions in consultation with the local population, but continuing to use coal is no solution to structural problems. This clearly shows that large sections of the population support efforts to find a political compromise for a coal phaseout in Germany.

# HIGH APPROVAL FOR THE OBJECTIVES OF THE ENERGIEWENDE



n = 7,459

## Approval for coal phaseout in coal-mining states



● Strong support   ● Support   ● Neutral   ● Disapproval   ● Strong disapproval   ● Don't know

n = 278 (Brandenburg), 1,429 (North Rhein-Westphalia), 401 (Saxony), 266 (Saxony-Anhalt)

### 3 | DISPUTED IMPLEMENTATION OF THE ENERGIEWENDE

**41%** of the population rate the **implementation of the Energiewende in Germany as good, all in all**, **33%** regard it as poor. Among higher-income households, the positive evaluation is slightly higher than in the other income groups (**47%**).

Across all income brackets people are **particularly critical when it comes to the subject of costs: 66%** of the population consider the Energiewende to be (rather) expensive, only **17%** believe it to be (rather) affordable. **73%** are of the opinion that the Energiewende leads to higher electricity prices. **42%** of respondents do not believe that energy supply will become cheaper in the long term due to the Energiewende.

Also in the area of **fairness, scepticism prevails right across all income groups**: Almost every second person (**47%**) regards the Energiewende as unfair, while only a fifth (**22%**) deem it fair.

**67%** of the population believe that **the costs of the Energiewende are borne by “ordinary people”, while the wealthy and the companies tend to profit from it**. This assessment is particularly pronounced among the lower-income households (**71%**). But even among higher-income households, the majority also share this view (**57%**).

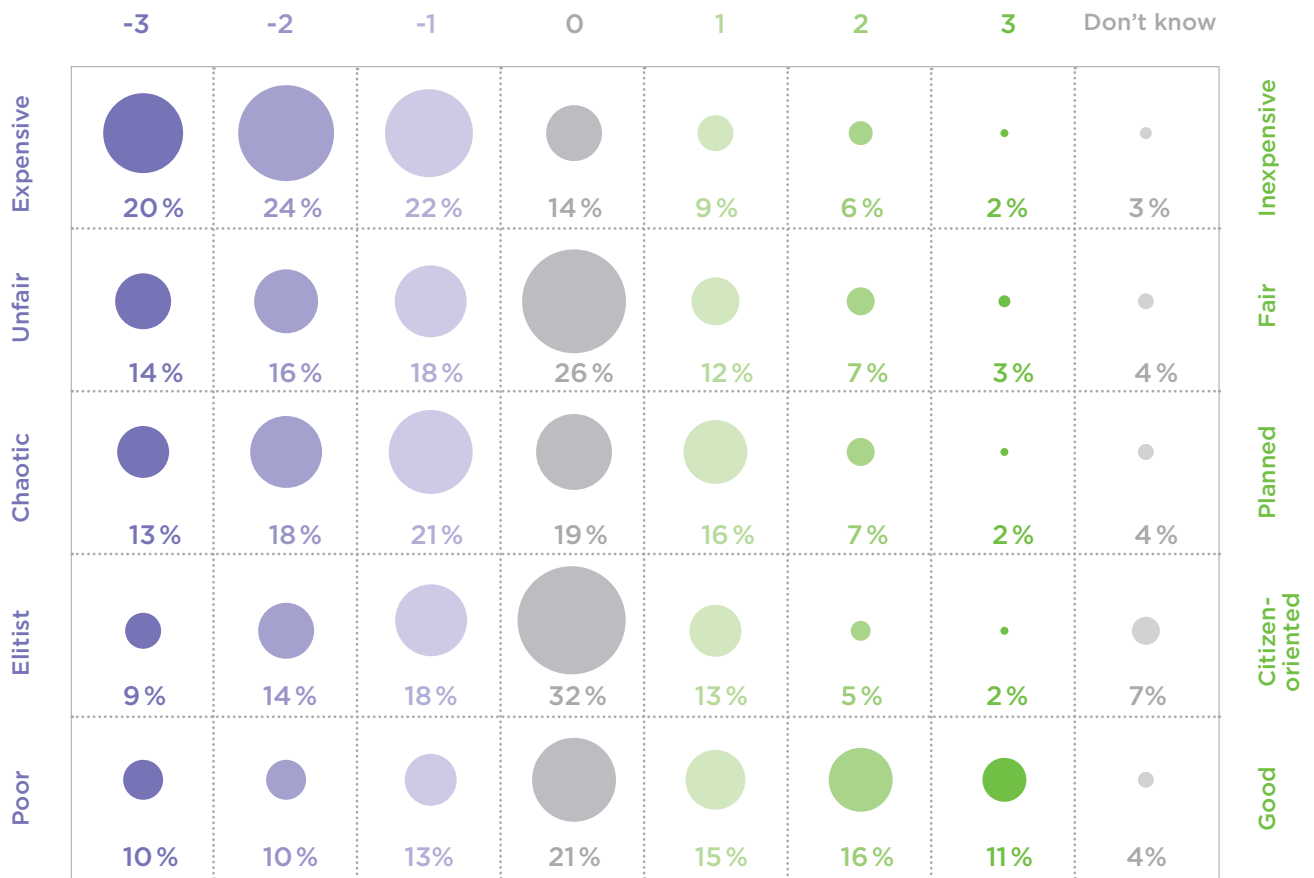
The macroeconomic effects of the Energiewende are seen rather positively. Almost every second person (**44%**) regards the **Energiewende as a job engine**. **60%** do not believe that the economy is damaged by the Energiewende.



Compared with the high approval rating for the objectives of the Energiewende, the population's assessment of its political implementation is much more sobering. Most people tend to associate the Energiewende with negative traits such as 'unfair', 'expensive' or 'chaotic', even though most find the implementation good, all in all. While the majority does not see any specific disadvantages for the economy, they are concerned about higher costs or increased electricity prices. Moreover, two thirds of people are convinced that the cost burden of the Energiewende is borne above all by “ordinary people”, while the wealthy and companies tend to profit from it. Around half of wealthy respondents also believe this to be the case. **This perceived imbalance in distribution policy determines, for the most part, the scepticism towards the actual implementation of an objective that is supported by almost everyone.**

# WEAK POINTS: COSTS AND FAIRNESS

Assessment of the Energiewende in Germany based on pairs of characteristics



n = 7,410

## 4 | POSITIVE ATTITUDES SURPRISINGLY ROBUST

**79%** of those who completely agree that the Energiewende leads to increased electricity prices endorse the Energiewende.

**83%** of those who completely agree that the costs of the Energiewende are borne by ordinary people, while the wealthy and the companies profit from it, endorse the Energiewende.

**86%** of those who assume that the Energiewende will have a negative financial and economic impact on their own lives in the next ten years endorse the Energiewende.



The positive attitude to the Energiewende is surprisingly robust. A large majority of respondents endorse the Energiewende and the expansion of renewable energies even if they have a very critical view of the implementation process in terms of costs and fairness. This even applies to people who assume that they will be financially disadvantaged as a result. In other words, most of the population is concerned about increased costs, but are willing to accept these for the sake of the Energiewende. It is therefore unlikely that the broad support will drop in the short term, despite persistent scepticism about the implementation process. The Energiewende is an integral part of the German population's vision for the future. **However, a reversal in this trend cannot be ruled out in the long term should dissatisfaction with the implementation of the Energiewende increase.**

## EVEN SCEPTICS ARE IN FAVOUR OF PROMOTING RENEWABLE ENERGIES



In principle, the expansion of renewable energies should be promoted.



Affirmed by:

**84%** of the population

This is also the opinion of:

**73%** of those who completely agree that the costs of the Energiewende are unfairly distributed.

**68%** of those who completely agree that the Energiewende leads to increased electricity costs.

**62%** of those who find the implementation of the Energiewende very expensive.

**62%** of those who find the implementation of the Energiewende very unfair.

## 5 | STRONG DESIRE FOR MORE POLITICAL PARTICIPATION IN EXPANSION OF ONSHORE WIND

**24%** of the population **reject the expansion of onshore wind energy plants, 7%** of them outright. Thus compared with all other renewable technologies, onshore wind energy expansion has the highest rejection rate.

Furthermore, **22%** of **Energiewende supporters disapprove of the expansion of onshore wind plants, 5%** of them strongly. The same applies to the supporters of the expansion of renewable energies, of whom **21%** reject onshore wind energy expansion, **4%** of them outright.

Regardless of how they are affected locally by wind energy plants, **85%** of the population find it important that **citizens are allowed to become involved at an early stage in the planning of wind energy plants in their vicinity.**

**55%** of the population are in favour of **letting the citizens affected have the final say in decisions on whether to build wind energy plants**, e.g. by means of a referendum. Approval of this measure is slightly higher among those with wind energy plants directly in front of their homes (**60%**).

**35%** of the population expressed their willingness to participate in a **protest action against planned wind energy plants. 10%** of them definitely and **25%** under certain circumstances, e.g. if they were affected directly by noise, etc. The latter also applies to **33%** of those who are in favour of expanding wind energy in principle.

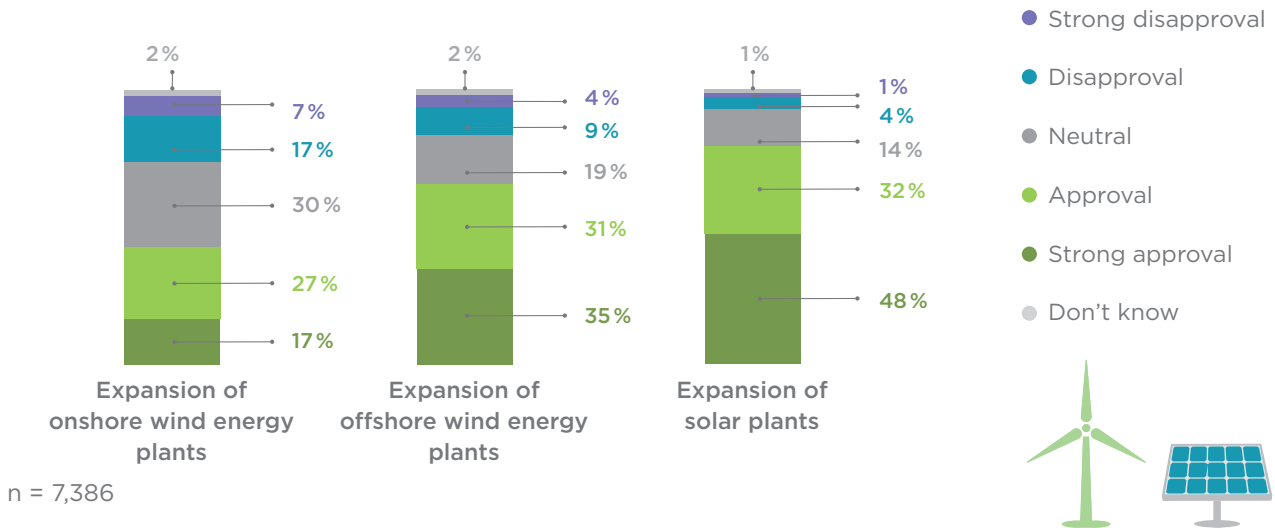


The expansion of renewable energies has broad support. However, that does not mean that specific expansion projects, especially for wind turbines, are supported to the same degree. A quarter of respondents reject the expansion of onshore wind energy, irrespective of whether the plants are built in their vicinity or elsewhere in Germany. So the scepticism is only an expression of 'Nimbyism' to a certain degree. It seems rather to reflect doubts about the necessity and suitability of wind energy in the context of the energy transition. Solar plants, in contrast, are rated much more positively. In addition, the barometer shows that people are keen to participate more directly in wind energy expansion. **The broad, substantial and early involvement of citizens is thus key to increased acceptance of wind energy. Wind power imposed from above will meet increasing opposition.**



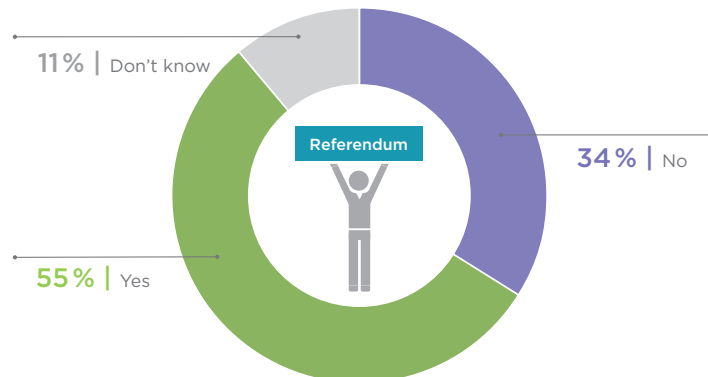
## GAP IN ATTITUDES TO WIND AND SOLAR ENERGY

### Attitudes of the population to the expansion of solar plants and offshore/onshore wind energy plants



## THE MAJORITY SAYS CITIZENS SHOULD HAVE THE FINAL SAY

Should affected citizens have the final say on new wind energy plants – e.g. by means of a referendum?



## 6 | LITTLE CONFIDENCE IN THE COMPETENCE OF THE POLITICAL PARTIES

Almost half of the population (**49%**) is dissatisfied with the policies of the former grand coalition (2013–2017) when it comes to how the Energiewende is progressing and being implemented.

None of the political parties represented in the German Bundestag has a concept for the implementation of the Energiewende that is supported by a large part of the population: **23%** of respondents find that “no party” has the best concept when it comes to the implementation of the Energiewende<sup>5</sup>. **21%** have no opinion on the matter. And **20%** believe that Alliance 90/The Greens have the best concept.

Alliance 90/The Greens is the only party that can convince a large majority of its own supporters (**74%**) of its energy transition competence. The CDU/CSU achieves this with half (**51%**) of its supporters, the FDP with **32%**, and the SPD with **26%**.

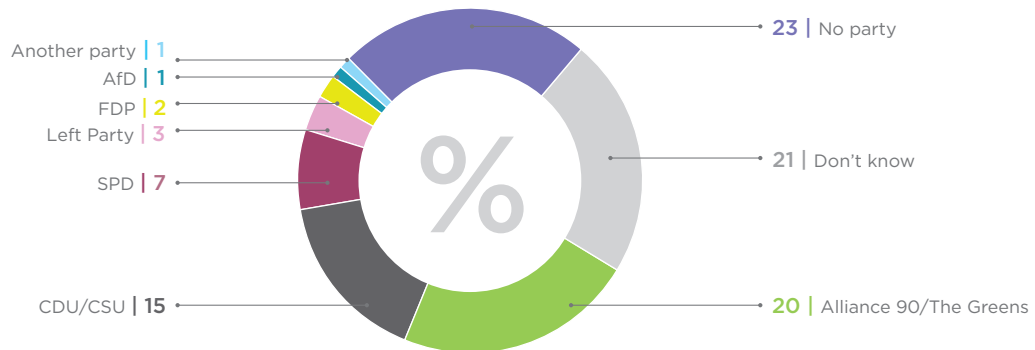
Alliance 90/The Greens is the only party that manages to convince significant numbers of the supporters of other parties of its energy transition competence, e.g. **29%** of SPD supporters, **22%** of Left Party supporters, and **8%** of FDP supporters.



Disenchantment with the parties is also reflected in people’s views on the implementation of the Energiewende: Almost one in four does not consider any party to be competent in this process, while one in five has no opinion on the matter. Most surprisingly, a larger proportion of SPD supporters regard their own party as less competent than its Green counterparts. In other areas of politics, the perceived competence deficit is much less pronounced, for example when it comes to economic competence, the creation of jobs, or social justice. That means that **the new federal government, as well as the opposition parties, must do more to consider the concerns of the population and to develop convincing concepts for the implementation of the Energiewende. The main focus should be on a fair distribution of costs and benefits, since Germans see major shortcomings in these areas.**

## LOW COMPETENCE RATING FOR ALL PARTIES

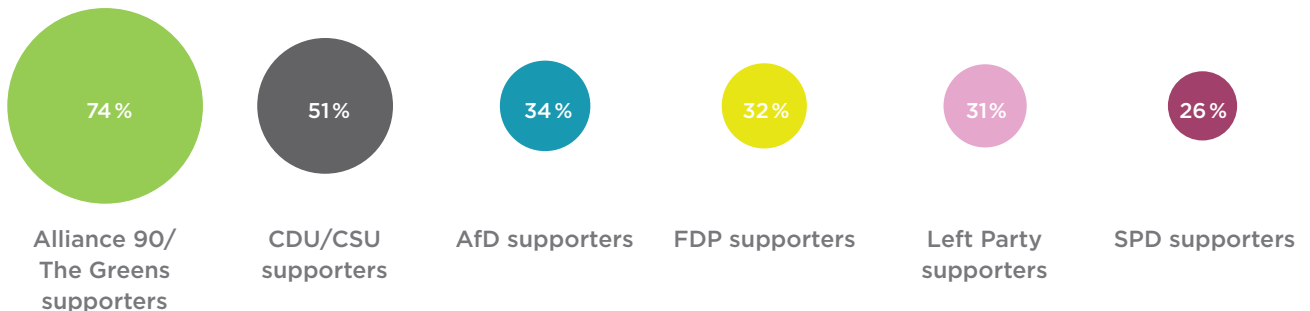
### Which political party has the best concepts for implementing the Energiewende?



n = 7,321; 7% of respondents did not answer this question

### Which political party can best convince its supporters of its energy transition competence?

Proportion of the supporters of each party who believe that their party has the best concept for the Energiewende.



n = 4,307, households stating a party preference

## 7 | MAJORITY REJECTS EXEMPTION OF INDUSTRY FROM RENEWABLE ENERGY (EEG) LEVY

In total, **72%** of the population rejects the exemption of energy-intensive companies from the EEG levy (Groups 1 and 2).

At **75%**, opposition to this exemption is **somewhat stronger among lower-income households**, but a clear majority of higher-income households (**66%**) also share this view.

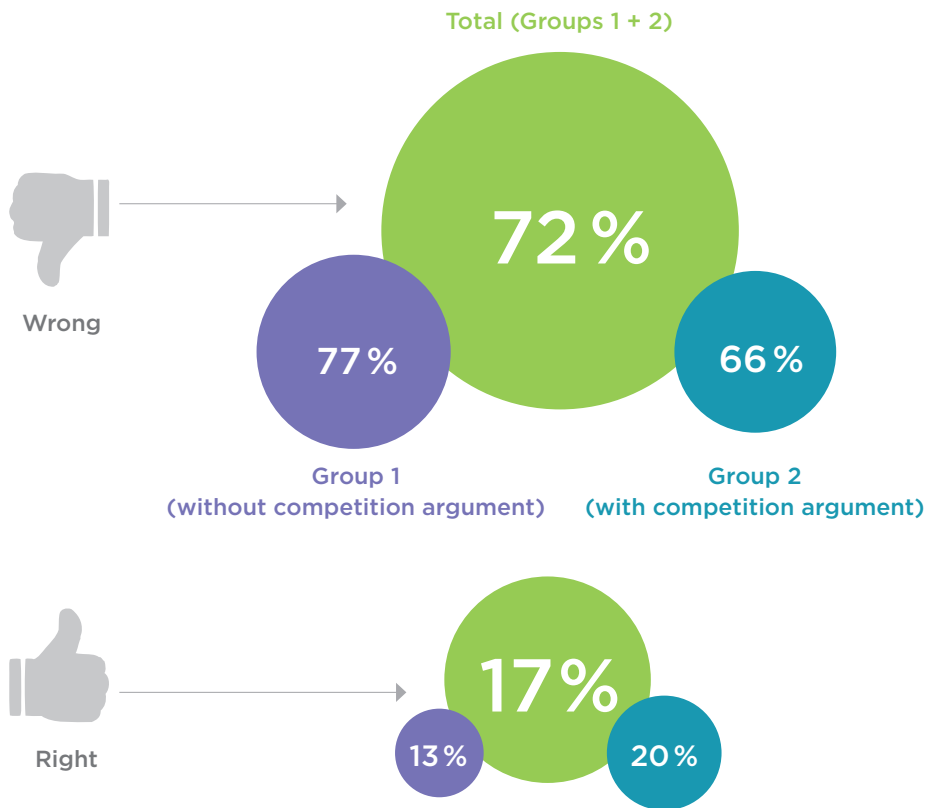
The level of opposition remains at two thirds (**66%**) even when the **preservation of the international competitiveness of the companies is stated explicitly as the reason for the exemption** (Group 2).



More than two thirds of the German population are against the exemption of energy-intensive industries from the renewable energy levy. They believe it is wrong that bulk buyers of electricity pay less per kilowatt hour than they do themselves, or than other businesses with lower energy demands. The federal government's justification that this is necessary for reasons of competitiveness is equally unpopular among respondents. So this issue highlights the huge gap between the concept of justice that prevails among the German public and the policies of the federal government. **The German government is being challenged to fundamentally rethink the exemption scheme. At a minimum, they should strive for more credibility and public support when designing exemption schemes.**

## COMPETITION ARGUMENTS DO NOT CONVINCE THE MAJORITY

At present, particularly energy-intensive companies (e.g. in the chemicals and steel industry) are generally exempt from paying the EEG levy. *[Sentence added for Group 2: In this way, the federal government aims to preserve international competitiveness.]* What do you think about this exemption?



n = 7,358  
n (Group 1) = 3,689  
n (Group 2) = 3,669  
Both groups were selected randomly.

## 8 | FAIR DISTRIBUTION OF COSTS: “THOSE WHO CONSUME MORE SHOULD PAY MORE!”

**81%** of the population disapprove of the fact that **consumers finance a large proportion of the costs associated with the Energiewende by means of levies and fees on electricity prices:**

- **60%** want those households and companies that cause high, climate-damaging emissions to pay the largest share of Energiewende costs.
- Only one in five (**21%**) favours a stronger **state financing** of the costs associated with the Energiewende.

Almost half of the population (**48%**) believes that the federal government should back progressive energy pricing to ensure a more just distribution of costs in the context of the Energiewende. The more a person consumes, the more expensive each additional unit of energy consumed should be. Even **42%** of those people who consider themselves to be high electricity consumers agree with this.

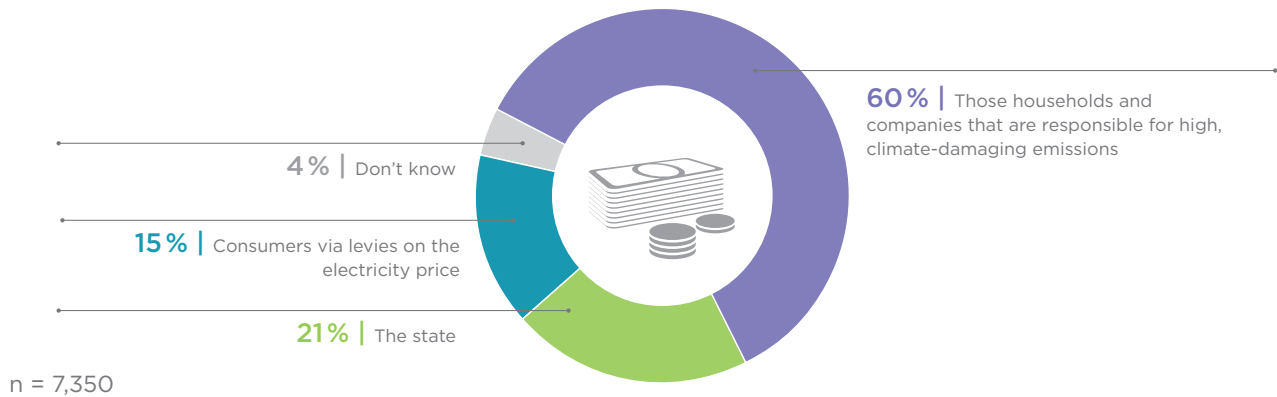


Most respondents believe that those who consume more energy than average should pay a higher price per unit. This would ease the burden on poorer households and act as an incentive to higher-income households to consume less energy. This view is also held by 42 % of consumers with high electricity demands. This desire for fairness is also reflected in the conviction that those who cause high CO<sub>2</sub> emissions should also bear a large share of the Energiewende costs. **Politicians and energy suppliers should therefore examine the extent to which a progressive component could be integrated into electricity and heating pricing. Another possibility would be the introduction of a progressive CO<sub>2</sub> tax to be levied on end consumption in all sectors.** A further option would be to suspend the EEG levy and other levies on the electricity price for a basic consumption level per person, and reintroduce it only when that level is exceeded.

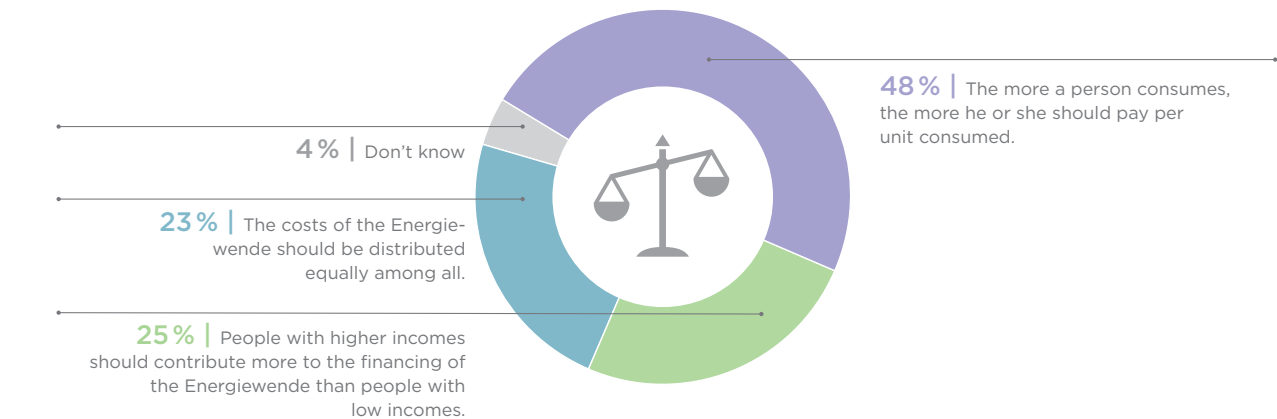
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## HIGH ENERGY CONSUMERS SHOULD CONTRIBUTE MORE

### Who should bear the brunt of the costs of the Energiewende?



### What would a fair distribution of Energiewende costs look like?



## 9 | A SOCIALLY JUST ENERGY TRANSITION: STATE SHOULD ASSUME MORE RESPONSIBILITY

**84%** of the population believe **that the state is responsible for ensuring a sufficient energy supply for everybody in Germany.**

- More than **half of the population (57%)** agree that **the state should ensure low energy prices**, so that population groups with a low income can afford to pay for their own energy supply. This is the view of **58%** of lower-income households and **52%** of higher-income households.
- Around a quarter (**27%**) of respondents think it is important that the **state provide financial assistance to citizens, as required**, so that they can cover their heating and electricity costs. An equal share of lower- and higher-income households support this view (**29%** and **30%** approval, respectively).

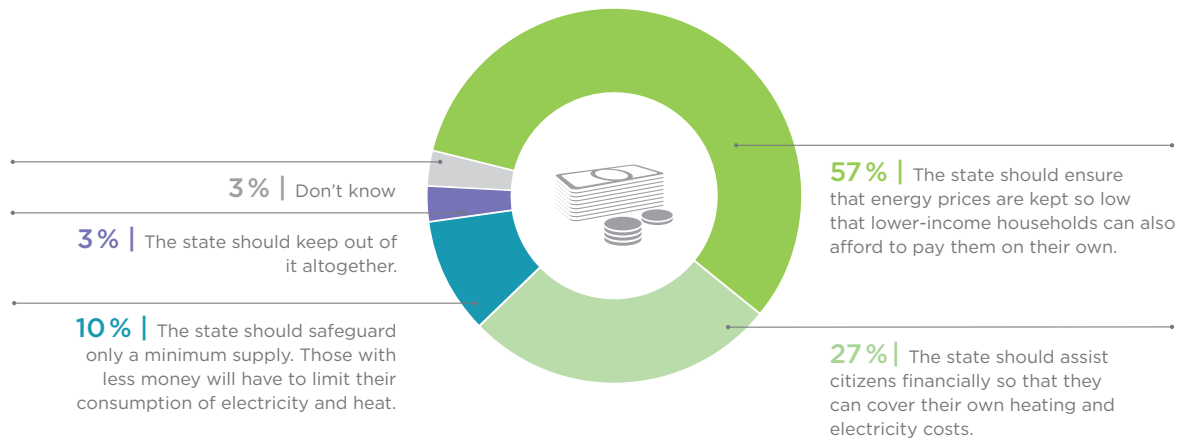
**88%** of the population believe that **rent increases due to energy-efficient retrofitting of buildings should be limited to an amount that is affordable for the tenant.** This is a view also shared by **75%** of landlords. In contrast, **8%** believe there should be no cap on rent increases, since this reduces the incentive for landlords to invest in upgrading the energy efficiency of their properties.



A socially just solution, represented among other things by a progressive tariff, is important to people in Germany. They believe that the onus is on the state to ensure that lower-income households can receive the energy services they need at an affordable price. Opinions are, however, divided on the means by which the state can achieve this – by way of subsidies or by influencing pricing policy. The vast majority agrees that measures to upgrade the energy efficiency of buildings should not translate into unreasonable rent increases. **Thus a fairer distribution of costs is at the very top of the population's wish list for energy policy.**

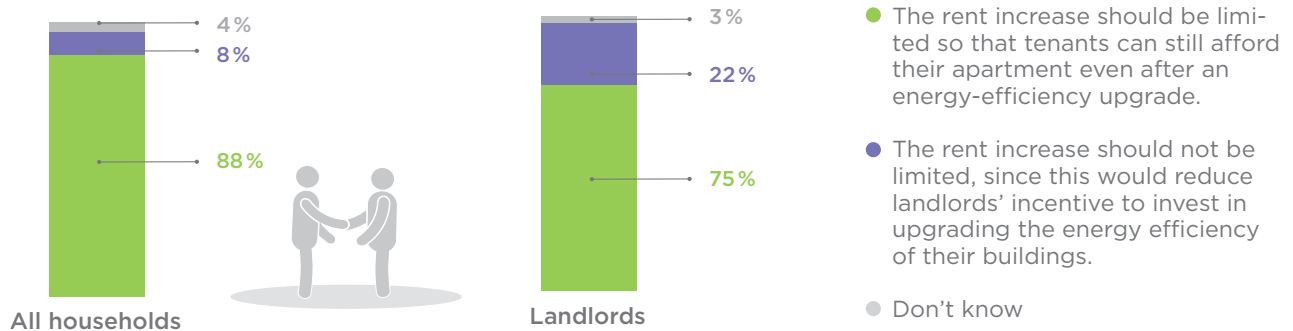


## ENERGY SUPPLY: MAJORITY FOR SOCIAL BALANCING



n = 7,366

## What do respondents think about additional rent increases after an upgrade to the energy efficiency of a building?



n = 7,331 (all households); n = 868 (landlords)

## 10 | YES TO ENERGY SAVING BUT RELUCTANCE TO INVEST IN CITIZEN ENERGY AND SMART HEAT

**93%** of the population state that they keep **energy efficiency in mind when buying new household equipment**. **87%** of the population find it important to **save energy** in everyday life.

**10%** of the population have already **invested, alone or jointly, in their own renewable energy systems**.<sup>6</sup> However, **61%** cannot imagine doing so in the next two years (**41%** not really and **20%** not at all). And **53%** of homeowners cannot imagine it.

**8%** of the population have already invested in an **intelligent heating system** (smart heat), i.e. **11%** of all homeowners and **3%** of all tenants in Germany.<sup>7</sup>

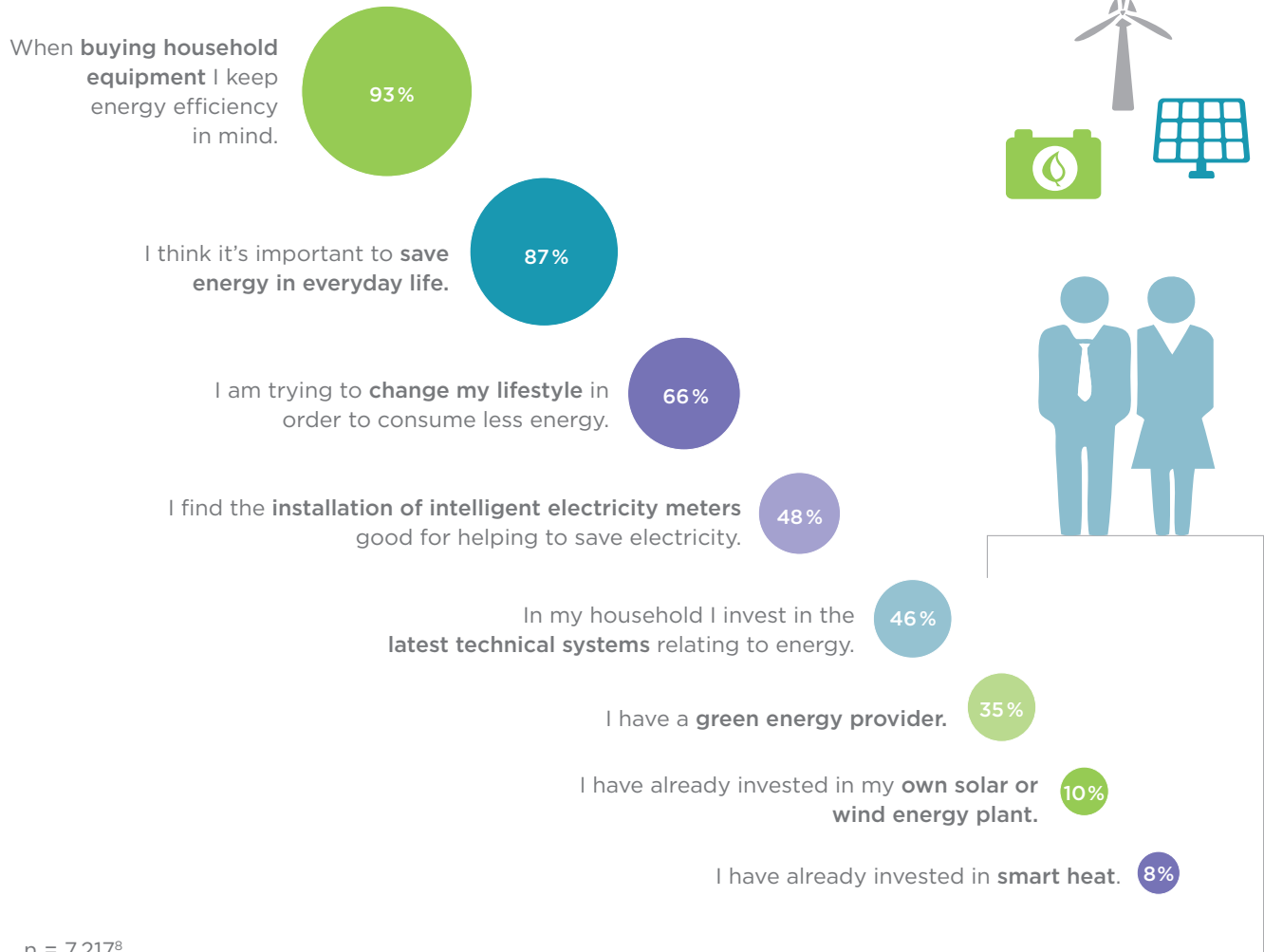
More than half of the population (**56%**) is not willing to invest in an **intelligent heating system** in the next twelve months.



People in Germany are aware that the Energiewende also requires their active involvement. But this involvement still tends to be confined to the purchase of energy-saving household devices and good intentions, e.g. to save energy, and very few people are prepared to make substantial financial contributions. The willingness to make investments that require additional dedication and knowledge is low, also among many homeowners. Many are reluctant to invest in renewable energy systems or digital heating control. In some cases this is due to a lack of information, but people are also unsure about what is economical for their own household, which systems are suitable, and how they can protect themselves against data abuse arising from digital technology. This uncertainty stems from a lack of transparency in the **market, which can be confusing to individual consumers**. **So far, energy advisory services have not been effective on a larger scale. These services need to become more active at local level and encourage investment in citizen energy projects by providing people with concrete information on the options available to them. A further expansion of financial incentives should also be examined.**

# “AS LITTLE EFFORT AS POSSIBLE, PLEASE!”

## Participation in the energy transition



## 11 | PARTICIPATION: LOWER-INCOME HOUSEHOLDS ALSO WILLING TO INVEST

The willingness to contribute to the Energiewende through investment is not limited to population groups that have been particularly active in this regard to date (homeowners and higher-income households), but is also similarly high among tenants and lower-income households.

Who is generally willing to invest in their own renewable energy systems in the next two years?

- **16 %** of all tenants and **23 %** of all homeowners in Germany
- **18 %** of lower-income households and **21 %** of all other income groups

Who is generally willing to invest in an intelligent heating system in the next twelve months?

- **27 %** of all tenants and **34 %** of all homeowners in Germany
- **24 %** of lower-income households and **34 %** of all other income groups

**42 %** of the lower-income households welcome the federal government's decision to make the installation of intelligent electricity meters mandatory, while the average percentage for all other income groups is **47 %**.



There is a willingness to contribute to the energy transition in all sections of the population. And those population groups that have hardly been involved at all to date in citizen energy projects or larger energy-saving investments could spearhead a whole movement in the future. **Therefore it is important to develop investment products that are targeted to specific income groups – tenants as well as homeowners – and also to provide financial support when it makes sense.** Many measures are already producing a return on investment. But even among those who are willing, uncertainties persist about the potential, impact, and practical implementation of such investments. Business, environmental and consumer associations as well as state institutions could assist here by developing a joint programme for providing better advice to all kinds of consumers.

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## SMART HEAT: ALREADY ATTRACTIVE FOR AROUND ONE THIRD OF ALL HOUSEHOLDS



**31%** of the population is generally willing to invest a one-off sum of 250 to 400 euros in an intelligent heating system in the next twelve months.

These are:



**24%** of all lower-income households



**31%** all middle-income households



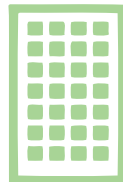
**37%** of all higher-income households

n = 1,774

Including:

**27%** of all tenants

**34%** of all homeowners



n = 2,227

## 12 | THE ENERGY TRANSITION IS A PROVISION FOR THE FUTURE: FEW EXPECT ADVANTAGES IN THE SHORT TO MEDIUM TERM

**73%** of the population expect that the **effects of the Energiewende on their own children and grandchildren, or on subsequent generations, will be positive.**

**53%** of the population expect that the Energiewende will have a rather **negative impact on their financial and economic situation** in the next ten years. This expectation is shared by all income groups to the same extent.

In the next ten years, neither positive nor negative effects are expected by:

- **73%** of respondents with regard to their own **profession.**
- **42%** with regard to their own **mobility.**
- **49%** with regard to their own residential **environment.**

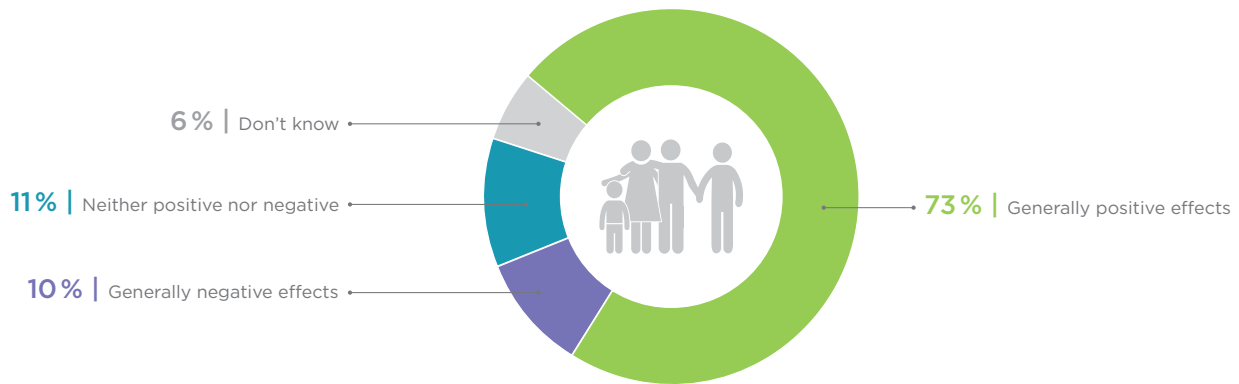
**45%** of the population expect the Energiewende to have **positive impact on their access to new technology** in the next ten years.



Intergenerational justice plays an important role in the population's assessment of the Energiewende, which is seen first and foremost as an investment in a worthwhile future. Only a few people believe that they will feel the benefits of the Energiewende in the short to medium term. And many expect it to have a low impact on their personal environment. Indeed, negative expectations prevail when people consider the impact on their financial and economic situation. The perception that the Energiewende is at quite a remove from one's own daily life may explain why large sections of the population do not believe they have many opportunities to contribute, and instead rely on politicians to implement this project. At the same time, politicians are deemed to lack competence in this area. **In the face of this dilemma, we need a political approach that creates more opportunities for individual action and sets the course for a fairer distribution of the burdens.**

## ADVANTAGES PRIMARILY FOR FUTURE GENERATIONS

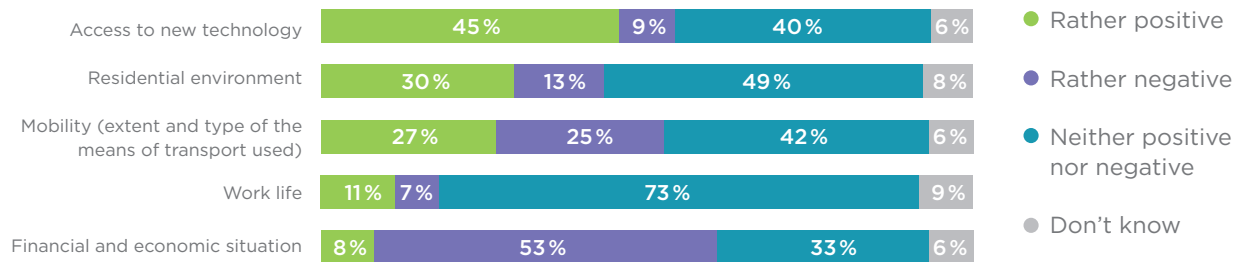
**73%** assume that the Energiewende will bring benefits to their children and grandchildren or to future generations.



Respondents' assessment of the future effects of the energy transition on their own children and grandchildren or on subsequent generations.

n = 7,293

### Expected effect of the Energiewende on everyday life



Respondents' assessment of the impact of the energy transition on different areas of their lives in the next ten years.

n = 7,297

## CONCLUSIONS

1. The energy transition is firmly anchored as an objective with positive connotations in all social groups. **The vast majority of the population believe that the Energiewende is the right path to take for a forward-looking energy supply.** So politicians can expect broad and robust support for a continued, targeted implementation of the Energiewende.
2. However, the population is less satisfied with how the German Energiewende is being implemented. Political action is needed to address this problem. People are particularly concerned about issues of costs and fairness. The Energiewende is perceived as expensive: Most people expect that it will bring them financial and economic disadvantages in the medium term. And the vast majority thinks that the costs of the project are not being distributed fairly. At present, these criticisms would not appear to endanger the political support for the Energiewende. **However, if this dissatisfaction persists, the broad support for the energy transition could be replaced by increasing scepticism and, ultimately, rejection.**
3. **When it comes to financing the Energiewende and the question of cost distribution, there is a huge gap between the current policy of the federal government and the population's notion of a just implementation process.** The financing of the energy transition by means of levies and duties on the electricity price for the end consumer is rejected by the majority, as is the EEG levy exemption scheme for energy-intensive industries. Most respondents believe that households and companies with high consumption and high CO<sub>2</sub> emissions should actually make a much higher financial contribution than those who consume less. The ideas of ordinary citizens regarding a fair distribution of costs should be included in further political debate about the design of the Energiewende.
4. **The federal government would be well-advised to focus more on social responsibility in the context of the Energiewende.** Most of the population, including higher-income households, want poorer households to have sufficient access to energy services too. And most people think that this should be the task of the state. Equally, tenants should not have to face increased rents as a result of upgrades to the energy efficiency of buildings. People are demanding effective protective measures, and such measures must be on the energy policy agenda in future.



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5. In addition, there is urgent need for action with regard to onshore wind energy expansion. People want more opportunities for political participation, which is only possible to a limited degree in current planning law. The desire for political involvement is a clear signal that we need an improved and expanded culture of participation. **Wind energy projects imposed from above are increasingly being rejected. For this reason, the legal parameters should be changed to make it possible for citizens to participate meaningfully and at an early stage in the planning of such projects.** More informal possibilities of becoming involved could also allow those who live near new energy installations to have more of a say in local planning processes.
  6. The need for political action is also clear when it comes to how we as individuals can contribute to the Energiewende. The energy transition is anything but a sure-fire success. People want to take part in it, but many are sceptical about the opportunities and parameters for action. **The challenge here is threefold: Opportunities for activating all sections of the population must be promoted, communicated more effectively, and financially supported.** What's needed are financial incentives, more information and transparency, e.g. with regard to electricity and heating bills, as well as comprehensive educational programmes, e.g. in schools, in order to reach young people.
  7. To sum up: A socially sustainable Energiewende can only be achieved with **policies that foster individual action and with a political approach that sets the course for a fairer distribution of the burdens and takes the concerns of all sections of the population seriously.**

## FOOTNOTES

- (1) The online survey of German-speaking households was conducted from June to July 2017 within the framework of forsa.omninet. Non-internet users also took part in the survey (via their television), so that the survey also includes these parts of the population, and the study remains representative for the population. In each household, the person who makes the decisions on matters of energy was surveyed. Since household surveys generally have lower participation by lower-income households, whose opinions, however, were of great relevance for our study, the sample was layered disproportionately according to household income (oversampling). The gross sample size was 12,941 households. The net sample size is 7,843 households, of which 83% completed the survey. The data evaluation of the household survey was carried out with the help of descriptive-statistical and explorative analyses. Since the survey was representative of the population, the terms "population" and "respondents" are used synonymously. In this publication the figures have been rounded up or down to whole percentages.
- (2) The focus groups were conducted in homogenous groups, each containing eight to ten participants: i) lower-income households, ii) higher-income households, iii) energy consultants, iv) employees in the renewable energies sector and v) employees in the conventional energy sector. The participants were recruited with the help of a marketing and social research institute.
- (3) The income classification used here is based on the income categories of the Cologne Institute for Economic Research (see also [www.arm-und-reich.de](http://www.arm-und-reich.de)). On the basis of the needs-weighted monthly net income (equivalised income), the following categories were defined in this study: lower-income households: up to 80% of the median of the equivalised income, households in the narrowly-defined middle: 81 to 150% of the median of the equivalised income, higher-income households: from 151% of the median of the equivalised income.
- (4) Supporters here are defined as those households (n = 4,307) that stated a party preference in the questionnaire.
- (5) Of those with a party preference who believe that "no party" has the best concepts, SPD supporters form the highest share, at 30%, followed by 28% CDU/CSU supporters and 11% Left Party supporters (n = 4,307).
- (6) 37% of these have invested in a solar heating system, 35% in a photovoltaic plant and 12% in a heat pump. 7% have participated actively in an energy cooperative or Bürgerenergie association. 90% of those who have already invested are home owners.
- (7) There are certainly differences between the income groups. 5% of the lower-income households and 12% of the higher-income households have already invested in smart heat.
- (8) n = 7,217 for the questions on energy-efficient household equipment, energy-saving in everyday life, lifestyle changes and investments in the latest technological applications. n = 7,843 for the question on procuring green electricity. n = 7,232 for the question on smart meters. n = 7,274 for the question on investments in solar and wind energy systems and n = 7,272 for the questions on investments in smart heat.

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## NOTES

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