Vestas®

Global Consumer Wind Study 2011

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In the largest survey of its kind, 31,000 consumers in 26 countries were asked about their demand for products made with renewable energy, as well as how energy decisions by some of the world's largest companies affect consumer choices.

The study, commissioned by Vestas and conducted by TNS Gallup, provides fascinating insights that enable corporations to understand consumer perceptions about climate change, renewable energy and how these relate to global brands.

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1. Preface

According to a May 2011 study by the UN Intergovernmental Panel on Climate Change (IPCC), the global potential for renewable energy is substantially higher than the current and future projected global demand for energy. In other words, we can develop enough renewable sources to meet most – if not all – of the world's energy needs.

That's the good news.

Also in May 2011, the International Energy Agency (IEA) announced that CO_2 emissions in 2010 reached a record 30.6 billion metric tons, which is a 5% increase over the previous record of 29.3 billion metric tons in 2008.

That's the bad news.

Quite simply, it's imperative that the world reduce its CO_2 emissions. We have the means to do so, yet we're moving in absolutely the wrong direction.

Private corporations are responsible for a major share of global energy consumption. Corporations, however, lack insight into consumer preferences for renewable energy, and consumers lack insight into what kind of energy is being used to produce the brands they buy.

Vestas believes that transparency in energy consumption enables consumers to make sensible and informed choices, which in turn will put pressure on corporations to act.

Until now, consumers have been kept more or less in the dark when it comes to understanding which brands are more climate-friendly than others in terms of energy consumption. Historically, the role of the citizen and the role of the consumer have been seen as separate, but in today's society, the roles have merged.

As citizens, we are deeply aware of the impact corporations have on the development of a prosperous society, and as consumers we are equally aware that we can influence how corporations act through our purchasing decisions. The citizen and the consumer in each and every one of us are coming together to make enlightened purchases.

A new important, powerful stakeholder has emerged: The "citizumer." By influencing the market, "citizumers" will drive a shift from fossil fuels to renewable energy used in the production of goods and the delivery of services.

That is why Vestas has initiated a number of activities – including the commissioning of this annual "Global Consumer Wind Study" – that provide insight into the role of renewable energy in relation to the products and services we consume and use.

Simultaneously with the release of this study, Vestas, in partnership with Bloomberg, is releasing a pioneering study and launching a global Corporate Renewable Energy Index (CREX) which ranks the use of renewable energy by the world's largest corporations.

The two studies complement each other, one from a consumer demand perspective, the other detailing corporate energy usage, which together will allow consumers and corporations to make decisions based on facts.

The use of renewable energy – especially wind energy – accelerates the reduction of greenhouse gas emissions. Yet it also accelerates energy independence, job creation, economic activity, sustainable societies and human progress. It's good for business, good for the planet, and good for all of us.

At Vestas, we will continue to produce superior, reliable wind energy systems. We will also continue to provide facts for the public debate on how to address the world's energy challenges – and how these challenges relate to climate, energy security, the economy, and our future, including the future of our children, grandchildren, and generations to come.

Morten Albæk
Group Senior Vice President
Group Marketing & Customer Insight
Vestas Wind Systems A/S

2. Executive **summary**

In 2011, Vestas commissioned TNS Gallup to conduct a never-before seen worldwide survey of consumer perceptions of climate change and its relation to leading global brands.

Covering of 31.000 consumers, 26 markets and 31 leading global brands, the study offers groundbreaking insights into consumer preferences towards climate-friendly corporations and consumers' willingness to act on their beliefs. The purpose of the study is to provide a competitive edge to corporations by giving them insight into the connection between climate change and consumer behavior.

The study shows that consumers believe that climate change is a serious challenge and that the use of renewable energy can help mitigate climate change. It also shows a strong consumer preference for renewable sources of energy, not only to power their homes, but also to power the manufacturing of the brands they consume.
Consumers are to a great degree willing to buy more, pay more for, and recommend climate-friendly brands produced using renewable energy. Yet in order for them to make informed purchasing decisions, they also want more information about the use of renewable energy in the production of the brands they purchase, for instance through the labeling of products and services.

The study's main findings:

- Consumers worldwide see climate change as the greatest single global challenge.
- 90% of consumers worldwide want more renewable energy.
- 79% of consumers worldwide have a more positive perception of brands produced with wind energy.
- 50% of consumers worldwide would pay extra for products based on renewable energy.
- 65% of consumers worldwide would prefer to purchase brands produced using wind energy.
- 53% of Chinese consumers rank climate change as the world's greatest single challenge
- Consumers want more information about the renewable energy used in the production of brands, for instance through labeling.

3. Methodology

Thirty-one thousand consumers surveyed during May, 2011

The survey was conducted during May 2011. One-thousand consumers were surveyed per country in countries with populations of less than 100 million. Two-thousand consumers were surveyed per country in countries with populations of more than 100 million.

Countries with two-thousand consumers surveyed include USA, Russia, India, China and Brazil. Japan is an exception, with only one-thousand consumers surveyed, despite its population of greater than 100 million.

The composition of markets chosen reflects both the need for developing global insights as well as the wish to include the renewable energy markets with the largest growth potential.

Brands evaluated

Consumers were asked to answer specific questions about leading global brands. Every respondent was asked about one brand.

The brands surveyed are:
Adidas | amazon.com | Apple | BMW | Coca-Cola | Danone | Dell | Disney | Ferrero Nutella | Gap | Zara | Google | Heineken | HP | IKEA | LEGO | L'Oreal | McDonalds | Microsoft | Nestlé | Nike | Nokia | Pepsi | Philips | Sony | Starbucks | Tesco | Toyota | UPS | VW | Walmart

Thirty-one brands were surveyed in all. All brands except Gap, Tesco and Walmart were surveyed in all countries. Three of the brands mentioned were only surveyed in the following markets: Canada, France, U.K., U.S., (Gap); U.K. (Tesco); U.S. (Walmart). These brands were only surveyed in specific markets due to the nature of their geographical footprint. Tesco, for instance, operates in other markets than those mentioned, but in these other markets they operate under different brand names.

Method of data collection and analysis

Online panel interviews were used in all countries. Data shown as "global" or "worldwide" is the simple average of the responses across countries included in this presentation. Thus, these figures do not take actual population or other criteria into consideration. (In the global average, for instance, China weighs double as much as Denmark due to its 2,000 respondents compared to Denmark's 1,000 respondents, despite the fact that China has a population of 1.3 billion and Denmark 5.5 million.)

In certain countries, the online methodology might not be able to generate a truly nationally representative sample, but when screening for people in households with electricity and allowing for slightly more urban samples, the online methodology is fully appropriate for the purpose of this study.

26 countries surveyed:

Australia	Brazil
Canada	Chile
China	Denmark
France	Germany
Greece	India
Italy	Japan
Mexico	Netherlands
New Zealand	Poland
Portugal	Russia
South Africa	South Korea
Spain	Sweden
Turkey	Ukraine
United Kingdom	USA

Regional segments:

U.S.: United States
China: China
EU+: Italy | Denmark | Greece | Germany | Spain | Sweden | Portugal | Netherlands | United Kingdom | Poland | France | South Africa | Russia | Ukraine | Turkey
Americas: Chile | Brazil | Mexico | Canada
Rest of Asia Pacific [RoA/P]: India | South Korea | Australia | New Zealand | Japan

Industry segments:

Automobiles: BMW | Toyota | VW
Food & Beverage: Coca-Cola | Danone | Ferrero Nutella | Heineken | McDonalds | Nestlé | Pepsi | Starbucks
Consumer Goods and Services: Adidas | Disney | LEGO | L'Oreal| Nike| Philips | UPS
Retail: amazon.com | Gap | IKEA | Tesco | Walmart | Zara
Technology: Apple | Dell | Google | HP | Microsoft | Nokia | Sony

4. Introducing the **Global Consumer Wind Study 2011**

Companies compete every day to deliver what consumers demand. Consumers have the option to reward those companies that best meet consumer demands and requirements. In other words, the success of a brand depends on consumer perception.

Climate change is undeniably one of the greatest challenges of our times, and is increasingly on the mind of consumers.

Many companies have incorporated a strategy for dealing with climate change issues, either as part of their Corporate Social Responsibility (CSR) strategy or as an integral part of their business case. This white paper adds to a field of knowledge that is increasingly being explored and gaining recognition among businesses and consumers, and as such it brings groundbreaking insights into consumer preferences towards climate-friendly corporations and the consumers' willingness to act on their beliefs.

Vestas, the world's leading wind turbine manufacturer, commissioned TNS Gallup to conduct this 2011 Global Wind Survey. Thirty-one thousand consumers were surveyed worldwide about a variety of issues relating to brand perception and their views about global concerns, including the environment and climate change, as well as their views about renewable energy, including wind energy.

The companies behind many recognized brands are actually doing quite a lot in terms of reducing their carbon footprint, including changing the way they produce their products and deliver their services in order to reduce their CO_2 emissions. Some companies go so far as to rethink their products and services to enable consumers to reduce CO_2 emissions in their daily lives, for instance the introduction of hybrid and electric automobiles or very energy-efficient household appliances.

Yet positive consumer perception of these brands in terms of mitigating climate change depends on how well the message of climate-friendly efforts is conveyed to the consumer.

xIn recent years, global warming and climate change have moved to the top of the political and societal agenda, and many companies have addressed the issue in advertising and marketing campaigns. Even companies that would otherwise be seen as a contributor to the problem of global warming—in particular producers of fossil fuels and suppliers of electricity based on fossil fuels—have been successful in creating a positive perception of their brands among consumers.

One way companies can reduce their carbon footprint and improve their brand image is to change their source of electricity for operations and production, for instance to switch from fossil fuels to renewable sources of energy such as solar, hydroelectric and wind. Yet it is difficult to make the resulting reduction in CO_2 emissions visible to the consumer.

With this study, Vestas hopes to provide insight into consumer perceptions, and drive corporate efforts to switch to renewable energy.

5. Consumers care about the climate-friendliness of leading global brands

Consumer preferences drive markets. Companies that succeed are characterized by their ability to adapt efficiently to demand, providing products and services that offer a perceived value and are cost-efficient for the consumer.

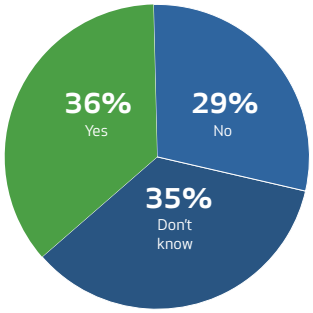
Today's consumer markets are characterized by a considerable number of options. For any soft drink, item of clothing or brand of car, there is a large variety of options—each option providing a specific value proposition to the consumer. Consumers need to navigate among the various options in order to choose a brand that matches their specific values and requirements, etc.

As climate change is increasingly at the top of consumers' minds, the carbon footprint of products and services purchased and consumed becomes an increasingly important factor when selecting from the many options available. Because of this awareness, the perceived climate-friendliness of a brand translates into "value" for the consumer.

Clear consumer preferences for climate-friendly brands

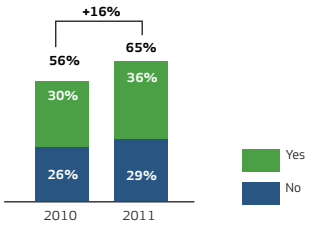
Two-thirds of consumers worldwide have an opinion, whether positive or negative, about the climate-friendliness of the major global brands surveyed. Among all consumers in all the regions studied, about one-third (36%) perceive the brands surveyed to be climate-friendly, while another one-third (29%) regard the brands to be not climate-friendly. Slightly more than one-third of consumers (35%) do not have an opinion or do not know the brands.

Do you perceive [surveyed brands] as **climate-friendly?**



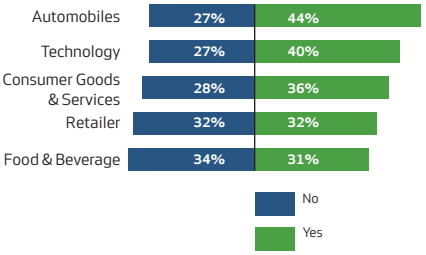
The share of consumers that have an opinion of whether a brand is climate-friendly or not is increasing. In the 2011 study, there is a 20% increase in positive consumer perception of the climate-friendliness of the brands surveyed compared to 2010 (36%, up from 30%), and a 12% increase in negative consumer perception (29%, up from 26%).

Do you perceive [surveyed brands] to be **climate-friendly?**



This increase indicates a trend that consumers are becoming more aware of the climate-friendliness of brands.

There is a large variation among the industry segments included in the study, which indicates consumers have a clear standpoint on whether an industry is climate-friendly or not. Although perhaps counterintuitive, Automobiles leads with 44% of consumers regarding the industry as being climate-friendly (and 27% not climate-friendly).



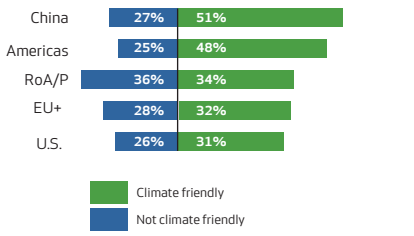
Vehicles powered by fossil fuel account for a significant part of global CO_2 emissions, yet automobile manufacturers (as well as oil and gas companies) have acted to influence consumer opinion, for instance with advertising claims about the energy efficiency of gasoline or diesel powered vehicles .

Food & Beverage is at the bottom of the ranking, with 31% of consumers perceiving the industry as climate-friendly. A noteworthy 42% gap exists between the bottom and top industry segments.

Consumer perception of individual brands varies around the world

Consumers perceive the same brands differently in the various regions, even though a brand's impact on climate change is not influenced by geographic location. When looking at the data from regional perspectives, consumers in China have the most positive perception of brand climate-friendliness (51%), while U.S. consumers have the least positive perception of brand climate-friendliness (31%). In between are Americas (48%), Asia/Pacific (34%), EU+ (32%).

Do you perceive the [surveyed brands] to be **climate-friendly?**



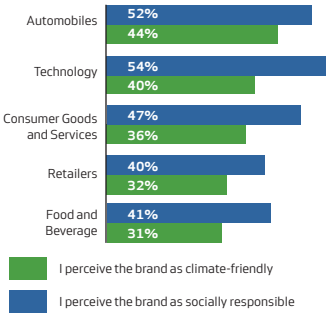
Contrary to what might be expected, in several developed countries with a generally greater access to information, a large share of consumers responding with No Opinion or Don't Know regarding the climate-friendliness of brands is found. Especially in markets such as Denmark (60%), Greece (49%), Sweden (48%) and Canada (46%), there is a large opportunity to establish a climate-friendly position in the minds of consumers.

Climate-friendly brands are also perceived as socially responsible

For years, companies have been developing and promoting their Corporate Social Responsibility (CSR) agendas. Today, climate change is only one of a wide range of issues covered by CSR.

The survey suggests a strong correlation between consumer perception of a brand's climate-friendliness and the perception of the brand in terms of social responsibility. Climate-friendliness could thereby be seen as a driver of the more general perception of social responsibility.

Is a climate-friendly brand also **perceived as socially responsible?**

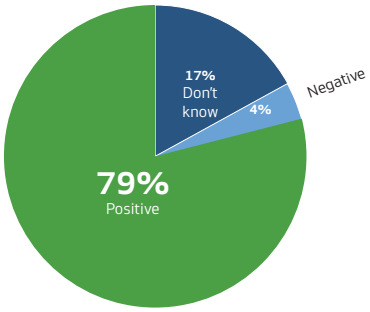


Corporations can influence consumer perception by choosing wind energy

In terms of the energy source used in production and operations, 79% of consumers would have a more positive perception of brands that use wind as the main source of energy.

This is valid for all industry segments. Technology ranks at the top and Retail at the bottom, with 81% and 72% of consumers respectively who would have a more positive perception of the brands within these segments.

If a brand were **produced using wind as the main source of energy**, how would this affect your perception of the brand?



1) Most consumers have a clear perception of whether brands are climate-friendly or not. Furthermore, there is a positive trend towards consumers taking a stand on brand impact on climate change.

2) There is a positive consumer perception that a brand's climate-friendliness is linked to whether the company is socially responsible or not.

3) Companies can influence consumer perception by choosing renewable energy sources.

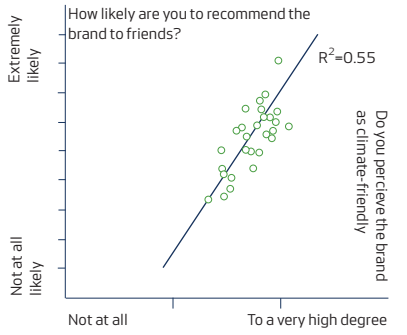
6. Consumers are willing to reward brands that use **renewable energy**

Consumers would have a more positive attitude towards purchasing brands they perceive to be climate-friendly, recommend these brands to friends and family, and in almost all cases be willing to pay a higher price for these brands. In other words, consumers are willing to "vote" for climate-friendliness with their purchases and recommendations.

Consumers would **recommend** brands they perceive as climate-friendly

There is a correlation between consumer perception of a brand being climate-friendly and the willingness of the consumer to recommend that brand to friends and colleagues.

Are you **more likely to recommend** a climate-friendly brand to your friends?

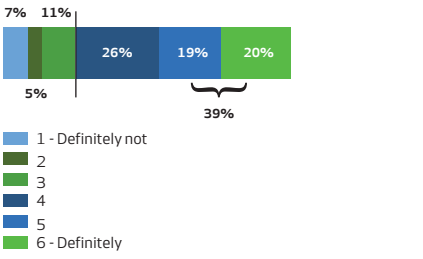


Consumers would **buy** brands they perceive to be climate-friendly

Consumers prefer climate-friendly brands compared to brands they perceive to be less climate-friendly or not climate-friendly at all, and would have a more positive attitude towards purchasing products and services they perceive to be climate-friendly.

Thirty-nine percent of consumers have a clearly positive preference for climate-friendly brands, while 26% have a slightly positive preference, with a total of 65% showing a positive preference for climate-friendly brands.

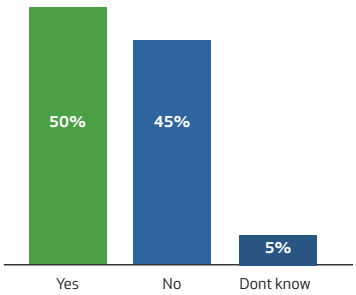
Would you be **more willing to buy** a brand primarily produced using wind energy?



Consumers are willing to **pay** extra for brands they perceive to be climate-friendly

Fifty percent of consumers responded that to some extent they would be willing to pay extra for products produced with renewable energy, while 45% responded that they would not. Five percent did not know if they would be willing to pay extra.

Would you **pay extra for products** that are produced using renewable energy?

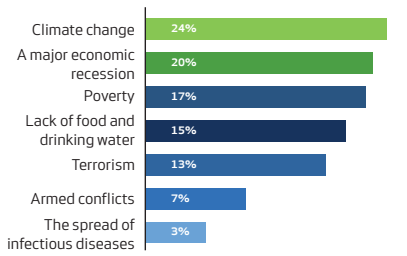


Consumers in developing economies are the most willing to pay extra for products produced and services delivered using renewable energy. Countries such as China (72%), Chile (72%) and India (72%) lead the field.

7. Concern about climate change leads to a change in consumer behavior and preferences

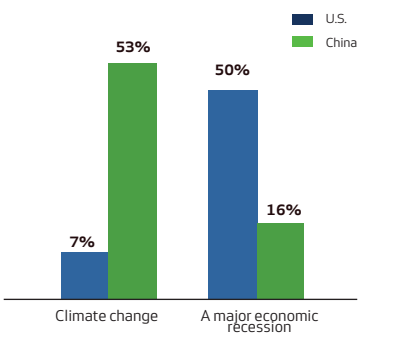
With several major challenges currently facing the world today, it is important for companies to be acutely aware of what is top of mind for consumers. Among 31,000 consumers worldwide, 24% rank climate change as the single most important challenge, with a major economic recession ranked second at 20%.

Which is **the number one challenge** facing the world today?



When it comes to perception of climate change and the perception of climate-friendliness, consumers in the U.S. and consumers in China often represent opposite ends of the ranking spectrum. Broken down by region, consumers in China perceive climate change as the number one challenge at 53% (with a major economic recession at 16%), while U.S. consumers view a major economic recession as the number one challenge at 50% and climate change as one of the lowest concerns, with 7% of U.S. consumers ranking it as the main challenge.

Which is **the number one challenge** facing the world today? (U.S./China)

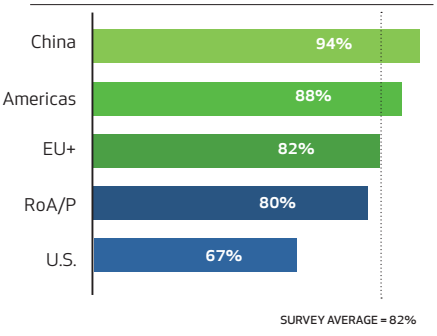


Climate change is real, and it is global. The severity of how regions are affected today varies, yet both China and the U.S. are experiencing severe floods and droughts as well as other weather-related disasters that could be attributed to climate change and are predicted by climate scientists as a result of global warming. The fact that there is a large difference when ranking the challenge of climate change by consumers in China and consumers in the U.S. says something about perception.

It is beyond the scope of this study to determine why consumers in one region place more emphasis on climate change as the world's single most important challenge rather than a major economic recession or other challenge. However, it could be argued that consumers in the U.S. are feeling the brunt of the global economic recession – with the crisis in the housing market and the recent crisis in the banking sector, high unemployment, and a relatively weak social safety net compared to many other industrialized nations. This puts pressure on the middle class in particular, making the economic slowdown an immediate concern to them.

In addition to believing that the world's single most important challenge is climate change, consumers worldwide also believe what the vast majority of climate scientists believe: that climate change is caused by human activity. Our 2010 Global Consumer Wind Study indicated that as many as 82% of consumers worldwide believe that human activity is the main cause of climate change.

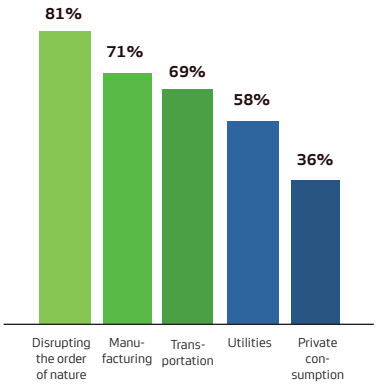
Do you believe **climate change** is caused by human activity? (From 2010 survey)



According to the 2010 study, not only do consumers believe that climate change is mainly caused by human activity, they are also willing to change their habits and patterns of consumption in order to mitigate climate change. Yet, as we see through much of this study, consumers in China and consumers in the U.S. often have diverging views, for instance as to what causes climate change. Consumers in China are at the top, with 94% ranking human activity as the cause of climate change, whereas consumers in the U.S. come in at the bottom, with two-thirds (67%) believing that human activity causes climate change.

When looking at what specific areas of human activity that they believe cause climate change, consumers worldwide ranked Disrupting the Order of Nature (deforestation, etc.) at the top with 81%, while Manufacturing Industry comes in second at 71%. The other available options were Transportation (69%), Utilities (power plants) (58%), and Private Consumption (36%).

To what degree do you believe that the following areas of human activity have a **high impact on climate change?**

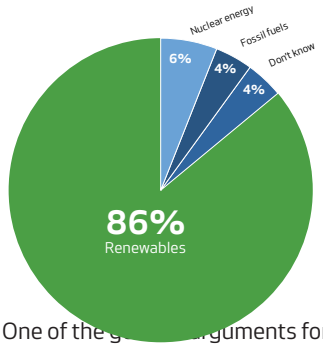


To some extent, consumers can influence each of these areas through their purchases and habits. For instance, even within an area such as deforestation, consumers can choose to purchase products made of wood sourced from certified wood plantations. As we show in the current study, consumers are willing to make purchasing choices that will help mitigate climate change.

Consumers prefer renewable energy

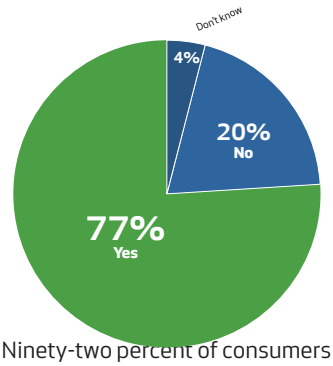
Our study also shows that consumers want to move to renewable energy sources. Eighty-six percent of consumers worldwide would prefer that their electricity supply is based on renewable energy, with only 6% preferring electricity from nuclear energy and 4% based on fossil fuels.

What would be your **preferred source of electricity?**



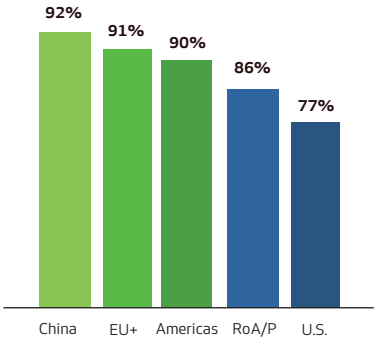
One of the g[illegible]rguments for using more renewable energy in various countries is to decrease dependence on imported oil and gas, for both economic and energy security reasons. The study reflects this, with consumers indicating a concern for dependence on imported fossil fuels. 77% of consumers are concerned about their country's dependency on other nations for fossil fuels.

Are you concerned about your country's **dependency on other nations for fossil fuels?**



Ninety-two percent of consumers in China rank renewable energy as a good solution to mitigate climate change, followed closely by EU+ (91%) and Americas (90%). The lowest ranking is with U.S. consumers, at 77%, which is still a relatively high figure.

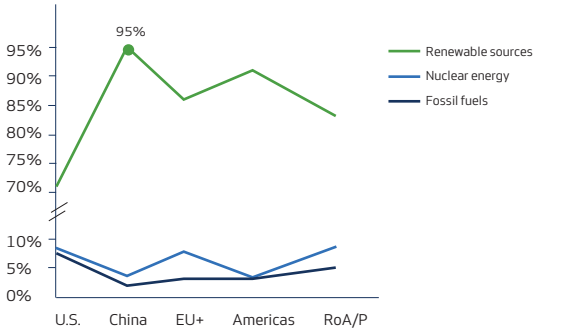
Do you believe renewable energy to be a **good solution to mitigate climate change?**



This coincides with the other general trends illustrated by the study, that at least when measured worldwide, consumers are concerned about climate change, and that they express a desire to mitigate climate change through their decisions and actions.

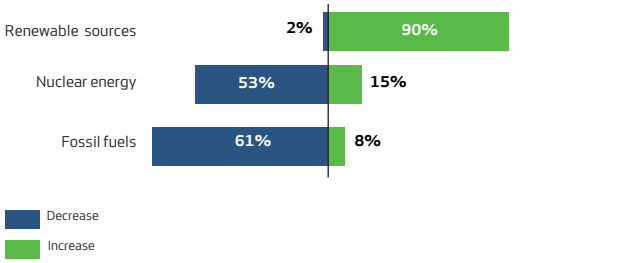
Ninety-five percent of consumers in China would prefer renewable energy as their source of electricity – the highest regional ranking.

From **which energy source** would you like to have your electricity supplied?



Worldwide, 90% of consumers list a preference for an increase in the use of renewable energy, 15% for an increase in the use of nuclear energy, and 8% for an increase in the use of fossil fuels.

How would you like **the different sources of energy** to develop over the coming five years?



71% of consumers in the U.S. would prefer renewable energy – the lowest regional ranking.

8% of U.S. consumers rank fossil fuels highest as their preferred source of electricity.

Over all consumers have a strong preference for the increased use of renewable energy, and more than half would like to see a decrease in the use of fossil fuels as well as a decrease in the use of nuclear energy.

9% of U.S. consumers rank nuclear energy highest as their preferred source of electricity.

2% of consumer in China rank fossil fuels as their preferred source of electricity.

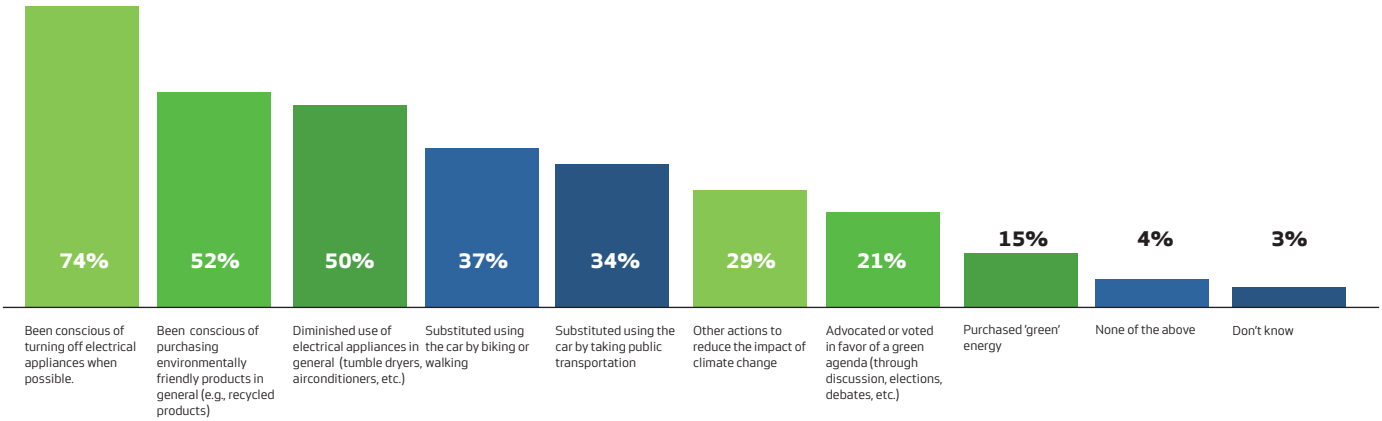
61% of consumers list a preference for a decrease in use of fossil fuels, 53% list a preference for a decrease in the use of nuclear energy, and 2% list a preference for a decrease in the use of renewable energy.

Consumers are acting on climate change in their personal lives.

Consumers not only rank climate change high on the list of challenges, they also show their preference for taking action by modifying their behavior to reduce their personal impact on the climate.

When asked what they do to reduce their impact on climate change, 74% of consumers are conscious of turning off electrical appliances, which is the top scorer. The other main mitigation actions are being conscious of purchasing environmentally friendly products (52%) and a decreased use of electrical appliances (50%).

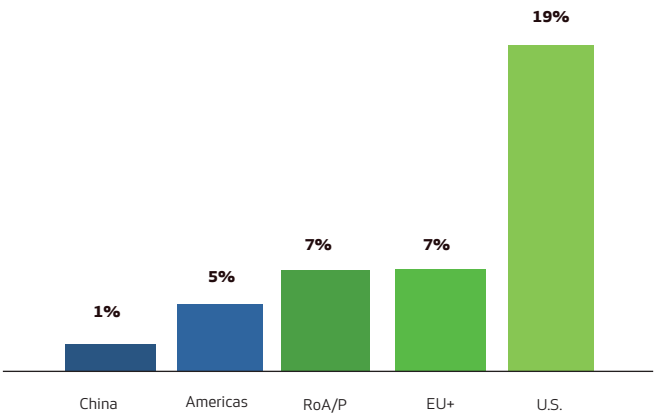
What have you done to **mitigate climate change?**



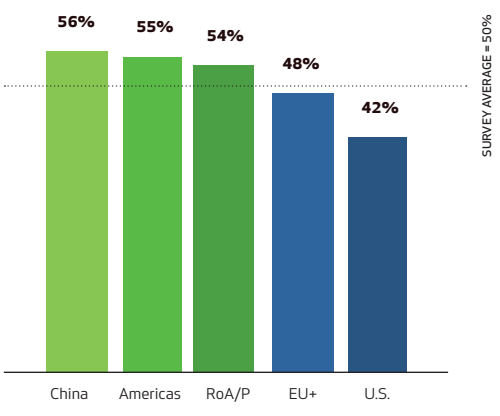
Seven percent of consumers worldwide listed None of the Above (4%) or Don't Know (3%) as to what they do to reduce their impact on climate change. Yet when broken down by region, only 1% of consumers in China list None of the Above or Don't Know combined, compared to 19% of consumers in the U.S. (12 % for None of the Above and 7% for Don't know).

As another example of consumer concern for climate change, half of all consumers support a tax on carbon emissions. Fifty percent of consumers worldwide believe a tax on carbon emissions is a good idea, 42% believe a tax on carbon to be a bad idea, while 7% replied Don't Know. In terms of regional differences, consumers in China are the most positive when it comes to a tax on carbon (56%), while consumers in the U.S. are the least positive, at 42%.

Respondents not listing any activity to **mitigate climate change.**



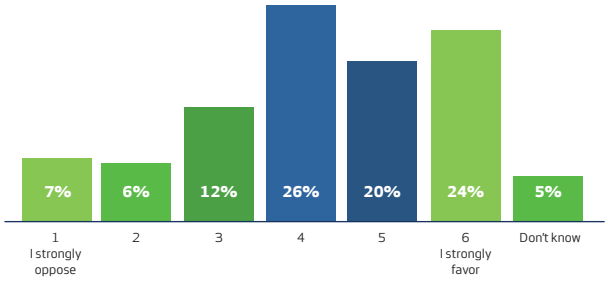
Do you believe a **tax on carbon is a good idea?**



Consumers also have an open attitude toward having renewable energy production closer to where they live.

A large obstacle for wind development has traditionally been citizen opposition to the construction of wind turbines near populated areas – the "Not In My Backyard" objection. This study shows, however, that only 7% of consumers worldwide would strongly oppose wind turbines within view of their homes. For U.S. consumers, this number drops to as low as 3%, which is in contrast to many of the other findings in this study for U.S. consumers, i.e., that U.S. consumers often score lower than consumers of other regions in relation to positive attitudes toward mitigating climate change, etc.

What do you think about having **wind turbines within view of your daily life?**



The finding that consumers are willing to have wind turbines "close to home" is also supported by the fact that slightly more consumers prefer onshore wind farms as opposed to offshore wind farms.

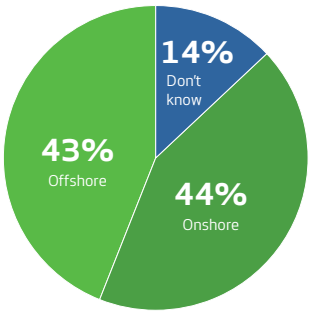
For U.S. consumers, more prefer onshore (41%) compared to offshore (28%) wind farms.

In terms of who should play a leading role in adopting renewable energy, consumers worldwide ranked National Government the highest, at 31%, followed by the major economies of the G8 and G12, at 20%.

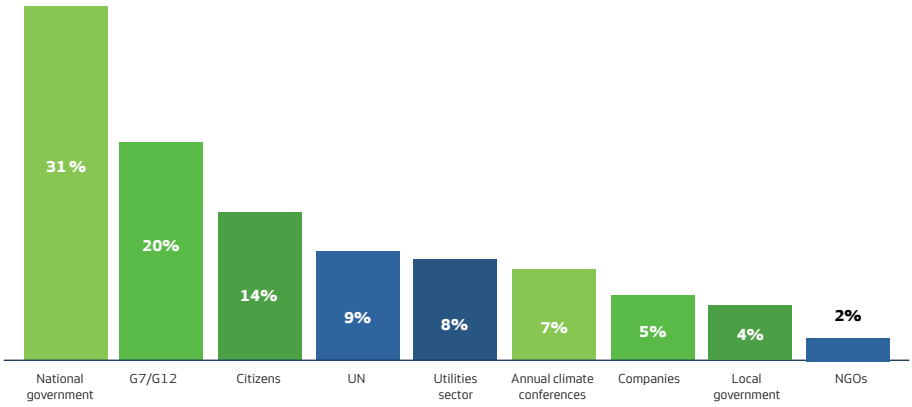
Yet in recent years, we have seen the difficulty of reaching consensus on an international and often national level when it comes to adopting climate change mitigation policies.

In many cases local governments, power utilities and private companies have been leaders in adopting climate-friendly policies and deploying renewable energy infrastructure. At least for private companies, until now there hasn't been a mechanism to inform consumers about what companies are doing to mitigate climate change. Such transparency allows consumers to make informed purchasing decisions and reward companies that use renewable energy.

Which type of wind energy parks do you prefer?



Who should lead in the **adoption of renewable energy?**

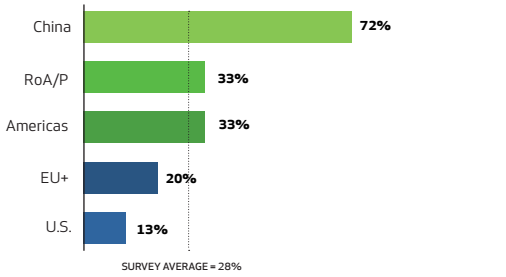


8. Substantial consumer preference for greater transparency in corporate energy consumption

This study shows high consumer awareness and concern regarding climate change, with a preference for national governments and international organizations to take action on the issue. Consumers are also willing to take personal responsibility for mitigating climate change through their own actions and behavior.

One of the obstacles for consumers who want to reduce their impact on climate change is the lack of renewable energy options and information. Only 28% of consumers worldwide have the option to buy electricity produced by means of renewable energy sources. More consumers in China (72%) perceive that they have access to green electricity sources compared to consumers in other regions.

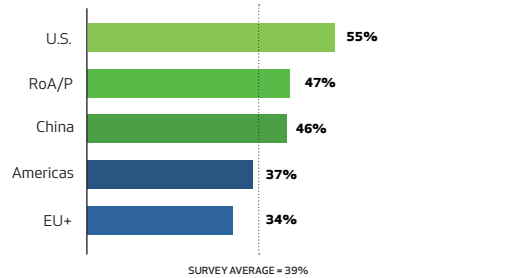
Do you have the option to **buy "green" electricity?**



Consumers have a preference for the availability of climate-friendly options both in terms of brands and energy supplies. Although consumers don't always have a choice when it comes to renewable sources of energy to power their homes, consumers do have the ability to purchase climate-friendly products. Yet consumers also need information to make informed choices when it comes to purchasing products and services.

In this study, a majority of consumers believe there is a lack of information concerning the energy sources used to produce the brands they purchase. Fewer consumers in EU+ feel there is adequate information (34%) compared to other regions (for instance, China 46%, U.S. 55%).

Is there enough information for brands you regularly buy in terms of **the energy used to produce them?**

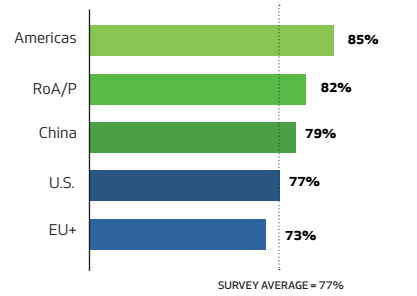


Although consumers prefer climate-friendly brands, the perceived lack of information and transparency makes it difficult for consumers to choose products or services that are climate-friendly.

A number of consumer labels exist in the marketplace that assist consumers in making active choices when selecting which brands to purchase. Many of the labels – including environmental labels – provide guidance to consumers when making purchasing choices based on brand values and production facts.

Seventy-seven percent of consumers worldwide believe consumer labels are important as guidance when choosing brands. Consumers in all regions seem to agree on this point, with a deviation of 12 percentage points from top to bottom among regions (85% for Americas, 73% for EU+).

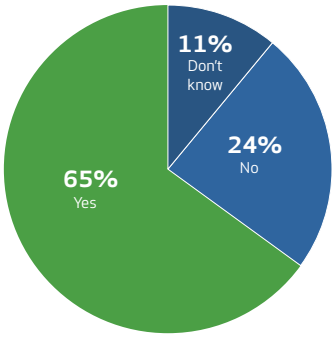
How important are consumer labels on products as guidance for you?



Yet until recently, consumer labels weren't available that allow consumers to make informed choices regarding climate-friendly products and services.

The study also shows that 65% of the consumers would have a positive view of a consumer label that identifies climate-friendly brands by providing information and transparency about wind energy used in production and operations.

Would a **consumer label such as WindMade™** be relevant to you?



A new climate-friendly consumer label was introduced in January 2011 called WindMade™. WindMade™ is the first consumer label that identifies products and services made with wind energy, allowing consumers to make conscious choices about brands and their use of wind energy. The aim is to increase the demand for products that embrace renewable energy sources in general, and wind energy in particular .

A Brussels-based independent non-profit organization has been established that will manage WindMade™, supported by a consortium that includes The Global Wind Energy Council, WWF, the LEGO Group, the UN Global Compact, Vestas Wind Systems, PricewaterhouseCoopers, and Bloomberg. The standards for WindMade are still being finalized and expected to be announced in September 2011.

With an increase in products and services that use labels such as WindMade™, it will be easier for consumers to select brands that are climate-friendly and avoid brands that lack the label. This will send a message to companies that currently do not have climate-friendly brands that they should restructure their production and operations in order to become more climate-friendly.

WINDMADE™

WINDMADE™

Vestas has taken the initiative to launch a worldwide labeling campaign called WindMade™ which allows consumers to know which brands are produced with wind power. The label is simple and intuitive for consumers, and the intention is to increase the positive perception consumers have about these brands, and ultimately increase sales.

Sixty-seven percent of consumers worldwide would pay extra for products labelled WindMade™.

The WindMade™ label is independent of the wind turbine manufacturer, whether it be Vestas or other makers of wind turbines. The label is offered through the non-profit Brussels-based WindMade™ organization, whose mission is to enable citizens to choose products and companies created with renewable energy. The organization is supported by Vestas Wind Systems, The Global Wind Energy Council (GWEC), WWF, UN Global Compact, The LEGO Group, PwC, and Bloomberg, which is the official data provider.

9. Appendix

Key questions from this year's Global Consumer Wind Study

Q1. Please rank Climate change of the challenges currently facing the world as a whole[1]

Rank 1	24%
Rank 2	15%
Rank 3	13%
Rank 4	12%
Rank 5	11%
Rank 6	10%
Rank 7	15%

Q1. Please rank Terrorism of the challenges currently facing the world as a whole[1]

Rank 1	13%
Rank 2	15%
Rank 3	13%
Rank 4	14%
Rank 5	14%
Rank 6	16%
Rank 7	15%

Q1. Please rank A major economic recession (financial crisis) of the challenges currently facing the world as a whole[1]

Rank 1	20%
Rank 2	14%
Rank 3	13%
Rank 4	13%
Rank 5	12%
Rank 6	12%
Rank 7	14%

Q1. Please rank Poverty of the challenges currently facing the world as a whole[1]

Rank 1	17%
Rank 2	18%
Rank 3	18%
Rank 4	16%
Rank 5	13%
Rank 6	10%
Rank 7	8%

Q1. Please rank Lack of food and drinking water of the challenges currently facing the world as a whole[1]

Rank 1	15%
Rank 2	17%
Rank 3	16%
Rank 4	14%
Rank 5	14%
Rank 6	13%
Rank 7	11%

Q1. Please rank Armed conflicts of the challenges currently facing the world as a whole[1]

Rank 1	7%
Rank 2	12%
Rank 3	14%
Rank 4	16%
Rank 5	18%
Rank 6	18%
Rank 7	16%

Q1. Please rank The spread of infectious diseases of the challenges currently facing the world as a whole[1]

Rank 1	3%
Rank 2	8%
Rank 3	13%
Rank 4	16%
Rank 5	18%
Rank 6	20%
Rank 7	21%

Q2. To what degree do you believe that the following areas cause human action-induced climate change? Utilities consumption (electricity, heating, water heating, etc)

Not at all	3%
To a slight degree	10%
To a certain degree	27%
To a high degree	34%
To an extremely high degree	24%
Don't know	2%

Q2. To what degree do you believe that the following areas cause human action-induced climate change? Transportation (car, aeroplane, shipping, etc.)

Not at all	2%
To a slight degree	6%
To a certain degree	21%
To a high degree	35%
To an extremely high degree	34%
Don't know	2%

Q2. To what degree do you believe that the following areas cause human action-induced climate change? Manufacturing industry

Not at all	2%
To a slight degree	5%
To a certain degree	19%
To a high degree	33%
To an extremely high degree	38%
Don't know	3%

Q2. To what degree do you believe that the following areas cause human action-induced climate change? Private consumption (groceries, clothes, TV, computers, etc.)

Not at all	6%
To a slight degree	19%
To a certain degree	36%
To a high degree	24%
To an extremely high degree	12%
Don't know	3%

Q2. To what degree do you believe that the following areas cause human action-induced climate change? Disrupting the order of nature (e.g. depletion of rainforests)

Not at all	2%
To a slight degree	3%
To a certain degree	11%
To a high degree	23%
To an extremely high degree	58%
Don't know	2%

Q3. From which type of energy source would you prefer to have your electricity supplied?

Fossil Fuels: Coal, Petroleum/Oil & Natural gas	4%
Renewable sources: Wind, Solar, Hydro, Biomass & Geothermal	86%
Nuclear energy	6%
Don't know	4%

Q4. How would you prefer the following energy sources to develop in your country the next 5 years? Fossil Fuels (Coal, Petroleum/Oil & Natural gas)

Decreased use of	61%
Same as today	27%
Increased use of	8%
Don't know	4%

Q4. How would you prefer the following energy sources to develop in your country the next 5 years? Renewable sources (Wind, Solar, Hydro, Biomass & Geothermal)

Decreased use of	2%
Same as today	6%
Increased use of	90%
Don't know	3%

1 The option 'Don't know' (4%) has been excluded, and ranks 1-7 have been normalized on a 100% scale.

Q4. How would you prefer the following energy sources to develop in your country the next 5 years? Nuclear energy

Decreased use of	53%
Same as today	25%
Increased use of	15%
Don't know	7%

Q5. To what extent are you concerned that your country is dependent on the importation of fossil fuels (Coal, Petroleum/Oil & Natural gas) from other countries?

1 - Not at all concerned	5%
2	4%
3	11%
4	21%
5	23%
6 - Very concerned	33%
Don't know	4%

Q10. Which of the following types of wind energy parks would you personally prefer to become the most commonly used in the future in your country?

Onshore (wind turbines standing on land)	44%
Offshore (wind turbines standing at sea)	43%
Don't know	14%

Q11. To what extent do you believe increased use of renewable energy is a good solution to mitigate climate changes?

1 - It is definitely not a good solution	2%
2	1%
3	4%
4	13%
5	21%
6 - It is definitely a good solution	55%
Don't know	4%

Q11a. Please rank National government according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	31%
Rank 2	18%
Rank 3	14%
Rank 4	12%
Rank 5	9%
Rank 6	6%
Rank 7	4%
Rank 8	3%
Rank 9	2%

Q11a. Please rank Local Government according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	4%
Rank 2	16%
Rank 3	14%
Rank 4	14%
Rank 5	14%
Rank 6	12%
Rank 7	11%
Rank 8	10%
Rank 9	7%

Q11a. Please rank Companies according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	5%
Rank 2	10%
Rank 3	13%
Rank 4	14%
Rank 5	14%
Rank 6	13%
Rank 7	12%
Rank 8	12%
Rank 9	7%

Q11a. Please rank Utilities sector (i.e. where you buy your energy) according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	8%
Rank 2	11%
Rank 3	13%
Rank 4	14%
Rank 5	14%
Rank 6	13%
Rank 7	11%
Rank 8	10%
Rank 9	7%

2 The option 'Don't know' (16%) has been excluded, and ranks 1-9 have been normalized on a 100% scale.

Q11a. Please rank NGOs according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	2%
Rank 2	4%
Rank 3	6%
Rank 4	8%
Rank 5	11%
Rank 6	15%
Rank 7	16%
Rank 8	18%
Rank 9	20%

Q11a. Please rank the UN according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	9%
Rank 2	10%
Rank 3	10%
Rank 4	9%
Rank 5	10%
Rank 6	11%
Rank 7	13%
Rank 8	13%
Rank 9	14%

Q11a. Please rank G8 / G12 (Comprised of the biggest economies in the world) according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	20%
Rank 2	12%
Rank 3	10%
Rank 4	9%
Rank 5	9%
Rank 6	10%
Rank 7	10%
Rank 8	10%
Rank 9	9%

Q11a. Please rank The annual climate conferences (COP15, COP16 etc.) according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	7%
Rank 2	10%
Rank 3	11%
Rank 4	10%
Rank 5	10%
Rank 6	12%
Rank 7	14%
Rank 8	14%
Rank 9	12%

Q11a. Please rank Citizens according to whom you think should play a leading role in adopting renewable energy[2]

Rank 1	14%
Rank 2	8%
Rank 3	9%
Rank 4	9%
Rank 5	10%
Rank 6	9%
Rank 7	9%
Rank 8	10%
Rank 9	22%

Q12. Burning fossil fules leads to emission of carbon dioxide, often referred to as CO_2. CO_2 is under suspicion of causing global warming through the "Greenhouse effect". To what extent do you think it is a good or bad idea to have a tax on the emission of CO_2 (for both households and companies)?

1 - It's definitely a bad idea	19%
2	9%
3	14%
4	20%
5	12%
6 - It's definitely a good idea	18%
Don't know	7%

Q13. What is your attitude towards having wind turbines/wind mills within visible proximity of your daily life (i.e. near your home, workplace, etc.)?

1 - I strongly oppose	7%
2	6%
3	12%
4	26%
5	20%
6 - I strongly favour	24%
Don't know	5%

Q14. Does your household have the option of buying electricity produced by means of renewable energy sources?

Yes	28%
No	48%
Don't know	24%

Q15. What have you yourself done to reduce the impact of climate changes?

Substituted using the car by biking or walking	37%
Substituted using the car by taking public transportation	34%
Been conscious of turning off electrical appliances when possible	74%
Diminished the use of electrical appliances in general (tumble dryers, airconditioners, etc.)	50%
Advocated or voted in favor of a green agenda (through discussion, elections, debates, etc.)	21%
Been conscious of purchasing environmentally friendly products in general (e.g. recycled products)	52%
Purchased 'green' energy	15%
Other actions to reduce the impact of climate changes	29%
None of the above	4%
Don't know	3%

Q16. How important is a 'consumer label' on products as guidance to you?

1- Not at all important	5%
2	5%
3	9%
4	23%
5	24%
6- Very important	31%
Don't know	4%

Q17. Do you generally feel that you receive sufficient guidance on products you regularly buy in terms of which energy sources is used to produce them?

1- The guidance is not at all sufficient	21%
2	17%
3	18%
4	20%
5	11%
6 - The guidance is very sufficient	7%
Don't know	5%

Q21. How relevant do you feel that WindMade™ is to you?

1 - Not at all relevant	6%
2	6%
3	12%
4	25%
5	21%
6 - Very relevant	19%
Don't know	11%

Q25. How likely is it that you would recommend [selected brand] to friends and colleagues?

0 - Not at all likely	11%
1	3%
2	4%
3	5%
4	5%
5	14%
6	8%
7	10%
8	8%
9	4%
10 - Extremely likely	15%
Don't know	2%

Q26. Do you perceive [selected brand] as a climate friendly company?

1 - Not at all	8%
2	7%
3	14%
4	20%
5	11%
6 - To a very high degree	6%
Don't know	35%

Q27. Do you perceive [selected brand] as a social by responsible company?

1 - Not at all	6%
2	6%
3	13%
4	23%
5	16%
6 - To a very high degree	8%
Don't know	27%

Q28. To what extent would you overall be willing to pay extra for products that are produced with renewable energy?

1 - I would not at all be willing to pay extra	18%
2	13%
3	14%
4	23%
5	16%
6 - I would definitely be willing to pay extra	12%
Don't know	5%

Q30. If [selected brand] would use wind energy as its primary source of energy consumption, how would this affect your overall perception of selected brand?

I would get a much more negative perception	1%
I would get a more negative perception	1%
I would get a slightly more negative perception	3%
I would get a slightly more positive perception	26%
I would get a more positive perception	31%
I would get a much more positive perception	21%
Don't know	17%

Q31. If [selected brand] would use wind energy as its source for energy consumption, would you be more willing to buy products from or use them?

1 - I would definitely not be more willing to buy products from or use them	7%
2	5%
3	11%
4	26%
5	19%
6 - I would definitely be more willing to buy products from or use them	20%
Don't know	13%

In your opinion, what is climate change caused by? (from the 2010 study)

1 - It is completely caused by natural causes	4%
2	4%
3	8%
4	20%
5	29%
6 - It is completely caused by human actions	33%
Don't know	2%

Global Consumer Wind Study 2011

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