



Public Perceptions of Bioenergy in the UK

Appendix

Hannah Evans



View the full report 'Public Perceptions of Bioenergy in the UK' on the ETI website

Appendix – Survey Questionnaire

This Appendix lists the questions used in the 2016 survey. Questions which also formed part of the 2015 survey are marked with an *. Any other differences between the questions in 2015 and 2016 are noted in the footnotes.

1. ***In general, which ONE, if any, of the following BEST describes where you would MOST ideally like to live?**

- A city
- A suburban town (i.e. a town in an outlying residential area of a city)
- A rural town (i.e. a town in an area located outside a city)
- A village
- A hamlet (i.e. a settlement smaller than a village)
- Don't know

2. **Taking into account all the different priorities the UK Government has...**

Do you think the UK Government should do more or less to reduce greenhouse gas emissions in the UK, or are they currently doing enough?

- The UK Government should do **more** to reduce greenhouse gas emissions
- The UK Government is currently doing enough to reduce greenhouse gas emissions
- The UK Government should do **less** to reduce greenhouse gas emissions
- Don't know

3. ***For the following questions, by 'the UK', we mean the UK public as well as the UK Government.**

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

The UK should be trying to reduce greenhouse gas emissions

- Strongly agree
- Tend to agree
- Neither agree nor disagree
- Tend to disagree
- Strongly disagree
- Don't know

4. ***As a reminder, by 'the UK', we mean the UK public as well as the UK Government.**

The UK has committed to reducing its greenhouse gas emissions.

Which ONE, if any, of the following do you think is the MAIN reason for this?

- To tackle global climate change
- To improve air quality in the UK
- To reduce the UK's reliance on fossil fuels (e.g. coal, oil, gas etc.)
- To improve the security of the UK's energy supply (i.e. so that the UK has enough energy for the long-term)
- To reduce energy bills

- Other (free text)
- Don't know

5. ***Before taking this survey, had you ever heard of bioenergy? (Please select the option that best applies)¹**

- No - I had never heard of bioenergy
- Yes - I had heard of it, but I know nothing about it
- Yes - I had heard of it, and I know a little about it
- Yes - I had heard of it, and I know a fair amount about it
- Yes - I had heard of it, and I know a great deal about it

6. ***Which, if any, of the following do you think bioenergy is directly produced from? (Please select all that apply. If any of your answers are not shown in the list below, please type them in the 'other' box)**

- Agricultural waste
- The sun (i.e. sunlight)
- Household/ commercial/ food waste
- Crops
- Waste cooking oils
- Forestry
- Algae
- Coal
- Other (free text)
- Don't know

7. ***And which, if any, of the following do you think bioenergy can take the form of? (Please select all that apply. If any of your answers are not shown in the list below, please type them in the 'other' box)**

- Transport fuels
- Electricity
- Heat
- Gas
- Industrial chemicals
- Household insulation
- Food
- Other (free text)
- Don't know

Thank you for answering the previous questions. Please read the following information about bioenergy before answering the following questions...

'Biomass' is any purpose-grown material (e.g. crops, forestry or algae). 'Waste' can include household, food and commercial waste, waste from agriculture or forestry, or sewage sludge. Bioenergy is the name given to the different types of energy produced from biomass or waste.

¹ In 2015, the same question was asked, but the response options were, "Yes, I had" and "No, I hadn't"

Bioenergy can be in the form of electricity, heat, transport fuels (e.g. biodiesel or bioethanol) and gases such as bio-methane, which is similar to natural gas. Bioenergy can be produced on different scales, from domestic biomass boilers up to large power stations that produce electricity for more than one household. Please click forward to continue...

8. ***In general, to what extent do you support or oppose the use of biomass to produce bioenergy in the UK?**

- Strongly support
- Tend to support
- Neither support nor oppose
- Tend to oppose
- Strongly oppose
- Don't know

9. ***In general, to what extent do you support or oppose the use of waste to produce bioenergy in the UK?**

- Strongly support
- Tend to support
- Neither support nor oppose
- Tend to oppose
- Strongly oppose
- Don't know

10. **In general, to what extent do you support or oppose the use of each of the following renewable energy technologies to produce energy in the UK?**

- **Offshore wind energy – wind turbines installed at sea**
- **Onshore wind energy – wind turbines installed on land**
- **Solar panels installed on roofs**
- **Solar parks - panels installed in fields**
- **Marine turbines – turbines installed underwater at sea**

For each technology respondents were asked to select one of:

- Strongly support
- Tend to support
- Neither support nor oppose
- Tend to oppose
- Strongly oppose
- Don't know

11. ***Approximately, what percentage, if any, of renewable energy currently used in the UK do you think comes from bioenergy? (Please type your answer to the nearest percentage in the box below. If you are unsure, please give your best guess.)**

Respondents were able to input a figure between 0% and 100% (whole number only).

12. *Bioenergy currently meets 5% of all of the UK's total energy demand.

To what extent do you think this percentage should increase or decrease, or do you think it should stay the same?²

- Increase to more than 10%
- Increase to between 7% and 10%
- Increase to up to 7%
- Stay the same at 5%
- Decrease to between 3% and 5%
- Decrease to less than 3%
- Don't know
- Not applicable - I don't think bioenergy should be used at all

13. *As a reminder, 'biomass' is any purpose-grown material (e.g. crops, forestry or algae).

Which ONE of the following statements BEST describes where you think the UK currently sources its biomass for bioenergy? (Please select the option that BEST applies)

- The UK **imports all** of its biomass
- The UK **imports most** of its biomass but sources some domestically
- There is a **roughly equal split** between imported and domestically sourced biomass
- The UK sources **most biomass domestically** but imports some
- The UK sources **all biomass domestically**
- Don't know

14. *In general, which, if any, of the following would you say are positive features of bioenergy? (Please select all that apply. If any of your answers are not shown in the list below, please type it in the 'other' box)

- Reduces dependence on fossil fuels
- A renewable source of energy
- Can generate energy from waste
- Good for the environment
- Less polluting (i.e. it has lower greenhouse gas emissions than fossil fuels)
- Reduces the cost of energy in the UK
- Creates jobs
- Can be produced in the UK (i.e. there is a secure supply)
- Other (free text)
- Don't know
- Not applicable - I think bioenergy has no positive features

² In 2015, a similar question was asked but the statement read, "Bioenergy currently meets 3% of all the UK's total energy demand". The response options were adjusted accordingly. Respondents could select from increases up to 5%, to between 5 and 10%, or to more than 10%, or decreases to 3%, to between 1 and 3%, or to less than 1%. Respondents could also select 'stay the same at 3%', 'Don't know', or 'Not applicable – I don't think bioenergy should be used at all'.

15. ***And which, if any, of the following would you say are negative features of bioenergy? (Please select all that apply. If any of your answers are not shown in the list below, please type it in the 'other' box)**

- Increases competition for land (e.g. biomass might displace food crops)
- More polluting (i.e. it has higher greenhouse gas emissions than fossil fuels)
- Uses material that could be used elsewhere
- Bad for the environment
- Leads to global social inequality
- Not enough biomass is produced in the UK, so it would have to be imported
- Increases the cost of energy in the UK
- Not a renewable source of energy
- Other (free text)
- Don't know
- Not applicable - I think bioenergy has no negative features

16. ***To what extent do you agree or disagree with the following statement?**

- **Using bioenergy can contribute towards reducing the UK's greenhouse gas emissions**
- **Using bioenergy doesn't help tackle climate change**
- **Using bioenergy is better for the environment than using fossil fuels**

For each statement respondents were asked to select one of:

- Strongly agree
- Tend to agree
- Neither agree nor disagree
- Tend to disagree
- Strongly disagree
- Don't know

17. ***For the following question, please think about organisations that develop energy projects in the bioenergy sector.**

Please read the brief definitions below before answering the questions that follow...

- *By 'community group', we mean a set of people from the same local area who are working together to plan, build and operate a bioenergy installation.*
- *By 'small company', we mean a company in the bioenergy sector with fewer than 250 employees.*
- *By 'large company', we mean a company in the bioenergy sector that has at least 250 employees.*

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

- **Companies will be environmentally friendly only if they are financially rewarded for good environmental performance, or penalised for poor environmental performance**
- **Small companies are more likely to be environmentally friendly than larger companies, regardless of whether either are financially rewarded or penalised**

- **Companies are more likely to be environmentally friendly than community groups, regardless of whether they are financially rewarded or penalised**

For each statement respondents were asked to select one of:

- Strongly agree
- Tend to agree
- Neither agree nor disagree
- Tend to disagree
- Strongly disagree
- Don't know

18. *Still thinking generally about organisations that develop energy projects in the bioenergy sector...

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

- **Companies are more likely than community groups to complete their energy projects on time, on budget and to a good standard**
- **Community groups are more likely than companies to carry out environmental monitoring and ensure good environmental practices**
- **Companies are more able than community groups to carry out environmental monitoring and ensure good environmental practices**

For each statement respondents were asked to select one of:

- Strongly agree
- Tend to agree
- Neither agree nor disagree
- Tend to disagree
- Strongly disagree
- Don't know

19. *Thinking about the construction of new biomass power stations...

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

- **It is important to spend additional budget on designing biomass power stations to blend in with the landscape**
- **Biomass power stations should be built in rural locations (e.g. close to where biomass is grown)**
- **Biomass power stations should be built near urban centres (e.g. close to where energy demand is greatest)**

For each statement respondents were asked to select one of:

- Strongly agree
- Tend to agree
- Neither agree nor disagree
- Tend to disagree
- Strongly disagree
- Don't know

20. ***The use of bioenergy in the UK is increasing. Some people believe that the direction and expansion of the bioenergy sector should be led by an organisation.**

Which ONE, if any, of the following do you think should be the MAIN leader of the bioenergy sector? (If your answer is not shown in the list below, please type it in the 'other' box)

- The UK Government
- Industry/ energy companies
- Academics and environmental scientists
- A biomass supplier association
- Other (free text)
- Don't know
- Not applicable - no one should lead the direction and expansion of the bioenergy sector

21. ***Bioenergy installations that generate electricity or heat come in various sizes.**

Which, if any, of the following bioenergy installations would you be **in favour** of being used in the UK? (Please select all that apply. If any of your answers are not shown in the list below, please type them in the 'other' box)

- Domestic biomass boilers providing heat for individual houses
- Small power stations providing electricity for smaller areas
- Large power stations providing electricity for larger areas
- Biomass boilers providing heat for groups of houses (i.e. district heating in/ near households)
- Biomass boilers providing heat for large buildings (e.g. in/ near schools, offices, hospitals etc.)
- Other (free text)
- Don't know
- Not applicable - I wouldn't be in favour of any bioenergy installations being used in the UK

22. ***Which ONE, if any, of the following statements BEST describes how you think agricultural land (i.e. farmland) should be used in general? (If your answer is not shown in the list below, please type it in the 'Other' box)**

- Food production should always be the priority, even if it results in a surplus (i.e. there is too much of it)
- Only when land is unsuitable for producing food should it be used to grow crops that will be used for bioenergy
- Decisions on agricultural land use should be left to farmers³
- Land should be used in a way that is most productive for the country as a whole
- Other
- Don't know

³ In 2015, this option read, 'Decisions on agricultural land use should not be subject to national policy'.

23. Still thinking about agricultural land availability in the UK...

Which ONE, if any, of the following statements BEST describes your view?

- Almost all agricultural land in the UK is used productively – there is very little ‘spare’ land or opportunity to increase productivity
- Almost all agricultural land in the UK is used for a purpose however there are opportunities to improve land management and increase productivity
- There are significant areas of unused land in the UK, but the land that is used is already used productively
- There are significant areas of unused land in the UK and land that is used could be better managed to increase productivity
- None of these
- Don’t know

24. For the following question, please imagine that improvements in farming allowed the UK to produce the same amount of food on a smaller area of land, freeing up additional agricultural land (i.e. farmland) for other purposes...

Which ONE, if any, of the following statements BEST describes how you think that additional land should be used?

- Farmed to produce more food
- Forested (i.e. grow trees)
- Farmed to grow biomass for energy
- Used for building new houses or other infrastructure
- Managed for conservation and nature
- Other (free text)
- Don’t know
- Not applicable - I don't have a preference for how additional land should be used

25. The following question is about food self-sufficiency in the UK. Food self-sufficiency is measured as the value of food produced in the UK as a percentage of the value of food consumed in the UK. A high percentage means the UK is more self-sufficient and therefore relies less on imported food. A lower percentage means the UK is less self-sufficient and relies more on imported food. For example:

- 0% - the UK produces no food
- Less than 100% - the value of food produced is less than the value of food consumed in the UK
- 100% - the value of food produced is the same as the value of food consumed in the UK
- More than 100% - the value of food produced is more than the value of food consumed in the UK

Approximately, which ONE of the following percentages do you think represents the food self-sufficiency of the UK? (If you are unsure, please give your best estimate)

Respondents were able to select (at 10% intervals) between 0% and ‘150% or more’, or select ‘Don’t know’.

26. The following question is about fuel for energy self-sufficiency in the UK. Fuel for energy self-sufficiency is measured as the energy content of fuel produced in the UK as a percentage of the energy content of fuel used in the UK to generate energy. Fuels include fossil fuels such as coal, oil and gas, biomass & waste, nuclear fuel and electricity produced directly from renewable sources such as wind turbines and solar panels. Energy includes heat, electricity, gas and transport fuels. A high percentage means the UK is more self-sufficient and therefore relies less on imported fuel for energy. A lower percentage means the UK is less self-sufficient and relies more on imported fuel for energy. For example:

- 0% - the UK produces no fuel for energy
- Less than 100% - the energy content of fuel for energy produced is less than the energy content of fuel used in the UK to generate energy
- 100% - the energy content of fuel for energy produced is the same as the energy content of fuel used in the UK to generate energy
- More than 100% - the energy content of fuel for energy produced is more than the energy content of fuel used in the UK to generate energy

Approximately, which ONE of the following percentages do you think represents the fuel for energy self-sufficiency of the UK? (If you are unsure, please give your best estimate)

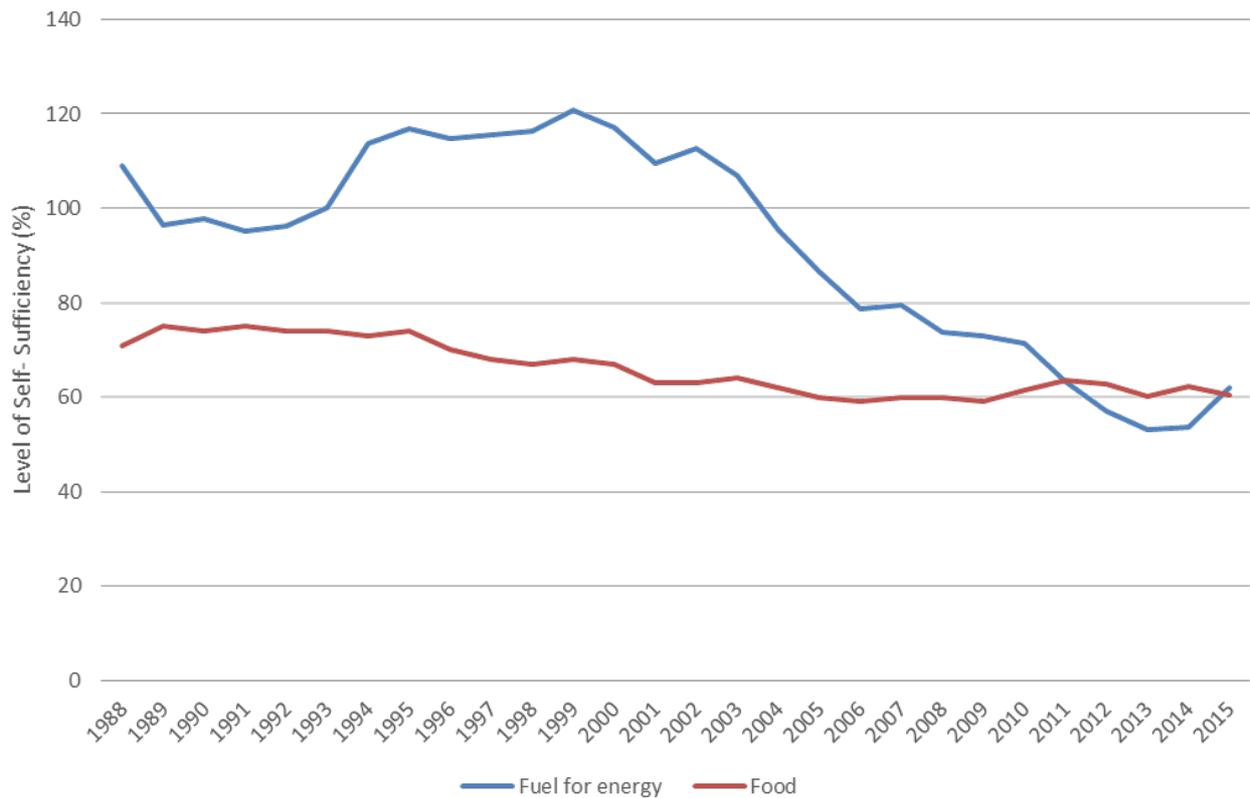
Respondents were able to select (at 10% intervals) between 0% and '150% or more', or select 'Don't know'.

We would now like you to read the following explanation before answering the questions that follow... "According to DEFRA⁴ and BEIS⁵, in 2015, the UK was 61% self-sufficient in food and 62% self-sufficient in fuel for energy. This means that, while the UK could meet almost two-thirds of its own food and energy requirements from domestic production, it is reliant on imported food and fuel to meet its needs completely. The chart below shows that food self-sufficiency (the red line) has declined since 1988 but has remained fairly stable for over a decade. Energy self-sufficiency (the blue line) peaked in the mid-1990s but has since declined. Since 2004, the UK has increasingly relied on imported fuel to generate energy. To interpret the chart, the higher the number, the more self-sufficient the UK is (0 = the UK produces no food or fuel, 100 = the UK produces enough food or fuel to meet its needs, greater than 100 = the UK produces more food or fuel than it needs)"

⁴ Defra (2015). Agriculture in the United Kingdom Datasets [online]. Available at:

<https://www.gov.uk/government/statistical-data-sets/agriculture-in-the-united-kingdom>

⁵ BEIS (2016). Digest of UK Energy Statistics Available at: <https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>



Please click forward to continue...

27. As a reminder, food self-sufficiency is the value of food produced in the UK as a percentage of the value of food consumed in the UK. In 2015, food self-sufficiency in the UK was 61%.

To what extent, if at all, does it matter to you that the UK is self-sufficient in **food**?

- A great deal
- A fair amount
- Not very much
- Not at all
- Don't know

28. Which **ONE**, if any, of the following statements **BEST** describes your view on food self-sufficiency in the UK?

- I think the UK should produce much more food to **significantly increase** its level of food self-sufficiency (e.g. to above 70%), and rely much less on imported food
- I think the UK should produce a little more food to **slightly increase** its level of food self-sufficiency (e.g. up to 70%), and rely a little less on imported food
- I think the current level of food self-sufficiency is acceptable
- I think the UK should produce a little less food and have a **slightly lower** level of food self-sufficiency (e.g. between 50% and 61%), and rely a little more on imported food
- I think the UK should produce much less food and have a **significantly lower** level of food self-sufficiency (e.g. to below 50%), and rely a lot more on imported food
- None of these

- Don't know

29. As a reminder, fuel for energy self-sufficiency is the fuel produced in the UK as a percentage of fuel used in the UK to generate energy. In 2015, fuel for energy self-sufficiency in the UK was 62%. Fuel includes the use of renewables, growing biomass or extracting fossil fuels such as oil, gas and coal. Energy includes heating, electricity and transport fuels.

To what extent, if at all, does it matter to you that the UK is self-sufficient in **fuel for energy**?

- A great deal
- A fair amount
- Not very much
- Not at all
- Don't know

30. Which **ONE**, if any, of the following statements **BEST** describes your view on fuel for energy self-sufficiency in the UK?

- I think the UK should produce much more of its own fuel for energy to **significantly increase** its level of fuel for energy self-sufficiency (e.g. to above 70%), and rely much less on imported fuels
- I think the UK should produce a little more of its own fuel for energy to **slightly increase** its level of fuel for energy self-sufficiency (e.g. up to 70%), and rely a little less on imported fuels
- I think the current level of fuel for energy self-sufficiency is acceptable
- I think the UK should produce a little less fuel for energy and have a **slightly lower** level of energy self-sufficiency (e.g. between 50% and 62%), and rely a little more on imported fuel for energy
- I think the UK should produce much less fuel for energy and have a **significantly lower** level of energy self-sufficiency (e.g. to below 50%), and rely much more on imported fuel for energy
- None of these
- Don't know

31. As a reminder, by 'the UK', we mean the UK public as well as the UK Government.

Please imagine the UK was to choose whether it used land (i.e. spare land, that was not being used) to increase its self-sufficiency in either food or energy...

Which, if either, do you think the UK should prioritise, or do you think they should have equal priority?

- Increasing food self-sufficiency should be the priority
- Increasing energy self-sufficiency should be the priority
- They should have equal priority
- Don't know

32. The UK relies on imports for several different products, including food, fossil fuels (such as coal, oil and gas) and biomass for energy.

Thinking about each of these three categories of imports...

How concerned, if at all, are you about **the security of supply** (i.e. that the UK may not be able to import enough to meet its needs or that supply might be interrupted by global events) for each of the following? (Please select ONE option for each row)

Respondents were asked to select one of the following option for EACH of the three import types: food, fossil fuels (such as coal, oil and gas), and biomass for energy:

- Very concerned
- Fairly concerned
- Not very concerned
- Not at all concerned
- Don't know

33. The UK relies on imports for several different products, including food, fossil fuels (such as coal, oil and gas) and biomass for energy.

Thinking about each of these three categories of imports...

How concerned, if at all, are you about **the global environmental impact of importing** each of the following? (Please select ONE option for each row)

Respondents were asked to select one of the following option for EACH of the three import types: food, fossil fuels (such as coal, oil and gas), and biomass for energy:

- Very concerned
- Fairly concerned
- Not very concerned
- Not at all concerned
- Don't know

34. The UK relies on imports for several different products, including food, fossil fuels (such as coal, oil and gas) and biomass for energy.

Thinking about each of these three categories of imports...

How concerned, if at all, are you about **the potential effect of the following imports on food availability in other countries** (i.e. that producing these products abroad will have an impact on the availability of food in that country)? (Please select ONE option for each row)

Respondents were asked to select one of the following option for EACH of the three import types: food, fossil fuels (such as coal, oil and gas), and biomass for energy:

- Very concerned
- Fairly concerned
- Not very concerned
- Not at all concerned
- Don't know

35. The UK relies on imports for several different products, including food, fossil fuels (such as coal, oil and gas) and biomass for energy.

Thinking about each of these three categories of imports...

How concerned, if at all, are you about **the competition with products produced in the UK** (and the impact this could have on UK production) for each of the following? (Please select ONE option for each row)

Respondents were asked to select one of the following option for EACH of the three import types: food, fossil fuels (such as coal, oil and gas), and biomass for energy:

- Very concerned
- Fairly concerned
- Not very concerned
- Not at all concerned
- Don't know

36. Do you have any additional concerns about importing products (such as food, fossil fuels (such as coal, oil and gas) and biomass for energy) into the UK? Please make clear whether your concern relates to all imported goods or a particular product.

A text box was provided for responses.

37. Thinking about imports into the UK...

Which ONE, if any, of the following BEST describes your views on imports into the UK?

- Provided that imported products meet relevant UK standards, I don't think there should be any limit on the type or quantity of products that can be imported into the UK
- Products should only be imported when they cannot be produced at all in the UK
- Products should only be imported to balance seasonal supply (e.g. to ensure year round availability)
- None of these
- Don't know

As a reminder, bioenergy is the name given to the different types of energy produced from biomass or waste. 'Biomass' is any purpose-grown material (e.g. crops, forestry or algae). 'Waste' can include household, food and commercial waste, waste from agriculture or forestry, or sewage sludge. Bioenergy is the name given to the different types of energy produced from biomass or waste. Bioenergy can be in the form of electricity, heat, transport fuels (e.g. biodiesel or bioethanol) and gases such as bio-methane, which is similar to natural gas. Bioenergy can be produced on different scales, from domestic biomass boilers up to large power stations that produce electricity for more than one household. Please click forward to continue...

38. *For the following question, please imagine you were shown conclusive scientific evidence that proved the following statement to be correct

Bioenergy reduces greenhouse gas emissions

Based on this, would your opinion of the use of bioenergy in the UK improve or worsen, or would it stay the same?

- Improve significantly
- Improve slightly
- Stay the same
- Worsen slightly

- Worsen significantly
- Don't know

39. ***Would your opinion of the use of bioenergy in the UK improve, worsen or stay the same if you were told that...⁶**

- **...the UK imported all of its biomass from overseas**
- **...the UK sourced about half of its own supply of biomass domestically**
- **...the UK sourced all of its biomass domestically**

For each statement respondents were asked to select one of:

- Improve significantly
- Improve slightly
- Stay the same
- Worsen slightly
- Worsen significantly
- Don't know

40. ***Would your opinion of the use of bioenergy in the UK improve, worsen or stay the same if you were told that...**

- **not utilising bioenergy could cost the UK at least £350 billion more than the next cheapest low-carbon option between now and 2050, in order to meet it's 2050 greenhouse gas emission reduction targets**
- **organisations (such as community groups, small companies or large companies) with plans to produce bioenergy have to demonstrate technical proficiency to planning authorities for them to be able to operate a bioenergy scheme**
- **an independent organisation was set up to regulate the UK bioenergy sector to ensure good environmental practice**

For each statement respondents were asked to select one of:

- Improve significantly
- Improve slightly
- Stay the same
- Worsen slightly
- Worsen significantly
- Don't know

41. ***Please imagine you were interested in finding out more information on bioenergy...**

Which, if any, of the following would you trust to give you reliable information? (Please select all that apply. If any of your answers are not shown in the list below, please type them in the 'other' box)

⁶ In 2015 the three statements were phrased differently: '...the UK has to import all of its biomass from overseas', '...the UK is able to source about half of its own supply of biomass domestically', '...the UK is able to source all of its biomass domestically'.

- A close friend and/ or relative
- A company operating in the bioenergy sector⁷
- Scientists/ academics or experts in the field
- Newspapers
- Television programmes
- Social media
- The UK Government
- Conservation/environmental interest groups
- An independent consumer or industry watchdog
- Other (free text)
- Don't know
- Not applicable - I wouldn't trust anyone to give me reliable information about bioenergy

42. *Overall, to what extent, if at all, do you trust organisations operating in the UK bioenergy sector?

- Trust a lot
- Trust a little
- Don't trust very much
- Don't trust at all
- Don't know

43. *Which, if any, of the following do you think would improve your opinion of the trustworthiness of organisations operating in the UK bioenergy sector? (Please select all that apply. If any of your answers are not shown in the list below, please type them in the 'other' box)

- If the organisation(s) had strong ties with the local community
- If the organisation(s) had directors that were held clearly and legally accountable for environmental compliance
- If the organisation(s) held regular public consultations
- If the organisation(s) were part of an accreditation scheme, ensuring good standards are met
- If the organisation(s) had to reimburse green subsidies if they failed to maintain good environmental and performance standards
- Other
- Don't know
- Not applicable - nothing would improve my opinion of the trustworthiness of organisations operating in the UK bioenergy sector

⁷ In 2015, this option read, 'A large company operating in the bioenergy sector'