SSI3 final survey 2023 (SSD)

Survey Flow

EmbeddedData
PROLIFIC_PIDValue will be set from Panel or URL.

Standard: Consent and PID (2 Questions)

Branch: New Branch
If
If This survey is part of an academic research project about climate change. It should take about 5... Yes, I understand and consent to take part in the survey Is Not Selected

EndSurvey: Advanced

Block: Demographics etc (9 Questions)
Standard: Pretreatment attitudes (3 Questions)
Standard: Introduction of knowledge quiz (1 Question)
Standard: General knowledge of CC (3 Questions)
Standard: Knowledge of mitigation (7 Questions)

EmbeddedData
gas_tax_msg = That's correct!
jobs_msg = That's correct!
us_emissions_msg = That's correct!
solar_cost_msg = That's correct!

Branch: New Branch
If
If Taxes on gasoline are found in all OECD countries. (The OECD is an organization of relatively wea... 0 Is Not Selected

EmbeddedData
gas_tax_msg = That's incorrect.
gas_tax_ans = The correct answer is 0.

Branch: New Branch
If
If About 120,000 Americans currently work in the coal industry. How many Americans work in the solar... Around 480,000, or four times as many Is Not Selected

EmbeddedData
jobs_msg = That's incorrect.
jobs_ans = The correct answer is "Around 480,000, or four times as many"

Branch: New Branch
If
If In 2007, the US emitted about 6 billion tons of carbon dioxide from fossil fuels. How has that nu... It went down by about 15%, to 5 billion tons Is Not Selected

EmbeddedData
us_emissions_msg = That's incorrect.
us_emissions_ans = The correct answer is "It went down by about 15%, to 5 billion tons."

Branch: New Branch
If
If In the US and elsewhere, large solar power plants are built to convert sunlight into electricity... The cost has gone down by around 80% Is Not Selected

EmbeddedData
solar_cost_msg = That's incorrect.
solar_cost_ans = The correct answer is "The cost has gone down by around 80%"

BlockRandomizer: 1 -

EmbeddedData
gas_tax_info = included
EmbeddedData
gas_tax_info = excluded

BlockRandomizer: 1 -

EmbeddedData
jobs_info = included
EmbeddedData
jobs_info = excluded

BlockRandomizer: 1 -

EmbeddedData
us_emissions_info = included
EmbeddedData
us_emissions_info = excluded

BlockRandomizer: 1 -

EmbeddedData
solar_cost_info = included
EmbeddedData
solar_cost_info = excluded

Branch: New Branch
If
If gas_tax_info Is Equal to excluded
And jobs_info Is Equal to excluded
And us_emissions_info Is Equal to excluded

And solar_cost_info Is Equal to excluded

Standard: No info treatments block (2 Questions)

Branch: New Branch
If
If gas_tax_info Is Equal to included
Or jobs_info Is Equal to included
Or us_emissions_info Is Equal to included
Or solar_cost_info Is Equal to included

Standard: Yes info treatments block (1 Question)

Branch: New Branch
If
If gas_tax_info Is Equal to included

Standard: Information about gas tax (1 Question)

Branch: New Branch
If
If jobs_info Is Equal to included

Standard: Information about clean energy jobs (1 Question)

Branch: New Branch
If
If us_emissions_info Is Equal to included

Standard: Information about US emissions (1 Question)

Branch: New Branch
If
If solar_cost_info Is Equal to included

Standard: Information about solar energy cost (1 Question)

Standard: Now back to the survey (1 Question)

BlockRandomizer: 2 -

Standard: Concern, taxes, and efficacy (9 Questions)

BlockRandomizer: 1 -

Standard: IRA control group (1 Question)
Standard: IRA treatment group (1 Question)

Standard: Donate your bonus (1 Question)
Standard: Answers to knowledge suvey (1 Question)
Standard: Feedback (1 Question)

Standard: Redirect (1 Question)

EndSurvey: Advanced

Page Break

Start of Block: Consent and PID

consent This survey is part of an academic research project about climate change. It should take about 5 minutes to complete. Your responses will be kept confidential.

We will ask questions about you (including your race, gender, and age) and we will ask you some questions about climate change.

This data will be used for academic research. It will contain no identifying information about you such as location or IP address. We will retain no information about you beyond what you explicitly tell us in the survey.

The data will be stored on secure servers and may eventually be made available on an online replication archive.

If at any point you wish to withdraw consent and your data, you may do so by exiting the survey. Do you understand the above information and consent to taking part in the survey?

- ○ Yes, I understand and consent to take part in the survey (1)
- ○ No, I do not understand and/or consent to take part in the survey (2)

prolific_id What is your Prolific ID?
Please note that this response should auto-fill with the correct ID.

_____

End of Block: Consent and PID

Start of Block: Demographics etc

age What is your age in years?

_____

sex What is your sex?

- ○ Male (1)
- ○ Female (2)

race What racial group best describes you?

- ○ White (1)
- ○ Black or African American (2)
- ○ American Indian or Alaska Native (3)
- ○ Asian (4)
- ○ Native Hawaiian or Pacific Islander (5)
- ○ Two or more races (6)

hispanic Are you of Hispanic, Latino, or Spanish origin or descent?

- ○ Yes (1)
- ○ No (2)

zip What is your zip code? (This is only for checking the representativeness of our survey.)

_____

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education What is the highest level of education you have completed?

- ○ Some high school (1)
- ○ High school graduate (2)
- ○ Some college (3)
- ○ 2-year college degree (4)
- ○ 4-year college degree (5)
- ○ Postgraduate degree (MA, MBA, MD, JD, PhD, etc.) (6)

hh_income What was your total household income before taxes during the past 12 months?

- ○ Less than $25,000 (1)
- ○ $25,000-$49,999 (2)
- ○ $50,000-$74,999 (3)
- ○ $75,000-$99,999 (4)
- ○ $100,000-$149,999 (5)
- ○ $150,000 or more (6)
- ○ Prefer not to say (7)

party_id Do you tend to think of yourself as a Democrat, a Republican, an independent, or something else?

- Democrat (1)
- Republican (2)
- Independent (3)
- Other (4)

lib_con In general, how would you describe your political viewpoint?

- Very liberal (1)
- Liberal (2)
- Moderate (3)
- Conservative (4)
- Very conservative (5)
- Not sure (6)

End of Block: Demographics etc

Start of Block: Pretreatment attitudes

know_cc_pre How **knowledgeable** would you say you are about climate change and efforts to fight it?

- ○ Not knowledgeable at all (1)
- ○ Slightly knowledgeable (2)
- ○ Moderately knowledgeable (3)
- ○ Very knowledgeable (4)
- ○ Extremely knowledgeable (5)

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concern_cc_pre How **concerned** are you about climate change?

- ○ Not concerned at all (1)
- ○ Slightly concerned (2)
- ○ Moderately concerned (3)
- ○ Very concerned (4)
- ○ Extremely concerned (5)

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efficacy_pre Do you agree with the following statement? "I believe I can do something to address climate change."

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

End of Block: Pretreatment attitudes

Start of Block: Introduction of knowledge quiz

quiz_intro **Knowledge quiz**

We will now ask you several factual questions about climate change and efforts to address it. We will share the correct answers with you later in the survey.

Some of these questions are very challenging, but if you don't know the answer **please do not look it up** -- we want to know what you think, not what you can find out by Googling!

End of Block: Introduction of knowledge quiz

Start of Block: General knowledge of CC

know_co2_meaning What does CO2 refer to?

- ○ Carbon monoxide (1)
- ○ Greenhouse effect (2)
- ○ Carbon dioxide (3)
- ○ Climate change (4)

know_main_cause_gw Which of the following phenomena is the main cause of global warming over the last 20 years?

- ○ Reduction of the ozone layer (the so-called ozone hole) (1)
- ○ Increased emissions of greenhouse gasses (the so-called greenhouse effect) (2)
- ○ Changes in ocean currents, e.g., “el Niño” (3)
- ○ Changes in the tilt of earth’s axis (4)

know_not_gw Which phenomenon is **not** caused by global warming?

- Glacial melting (1)
- Sea level rise (2)
- Changes in ocean currents (3)
- Earthquakes (4)

End of Block: General knowledge of CC

Start of Block: Knowledge of mitigation

know_what_helps Which of the following do scientists believe would help limit global warming?

- Making buildings more energy efficient (1)
- Increasing the use of electric vehicles (2)
- Generating more electricity from solar energy (3)
- Reducing the consumption of meat (4)
- All of the above (5)

know_renewable Which of the following is a form of renewable energy?

- Clean coal (1)
- Petroleum (2)
- Wind (3)
- Natural gas (4)

know_ira_dcr Which of the following is part of environmental legislation passed by the Biden administration?

- ○ Tax credits for people who purchase electric vehicles made in the US (1)
- ○ New taxes on the consumption of gasoline and other fossil fuels (2)
- ○ A nationwide cap-and-trade system to limit carbon emissions (3)
- ○ Federal funding for the construction of large hydropower dams (4)

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know_gas_tax Taxes on gasoline are found in all OECD countries. (The OECD is an organization of relatively wealthy countries such as the US, Canada, France, Germany, Australia and Japan.) These taxes are considered an important way to convince people to drive less and use more efficient vehicles. How many of the 37 other OECD countries do you think have lower gasoline taxes than the US?

- ○ 0 (1)
- ○ 14 (2)
- ○ 26 (3)
- ○ 37 (4)

know_jobs About 120,000 Americans currently work in the coal industry. How many Americans work in the solar and wind power industries?

- ○ Around 30,000, or one-fourth as many (1)
- ○ Around 60,000, or half as many (2)
- ○ Around 120,000, or the same number (3)
- ○ Around 240,000, or twice as many (4)
- ○ Around 480,000, or four times as many (5)

know_co2_change In 2007, the US emitted about 6 billion tons of carbon dioxide from fossil fuels. How has that number changed since then?

- ○ It went down by about 30%, to 4 billion tons (1)
- ○ It went down by about 15%, to 5 billion tons (2)
- ○ It stayed about the same (6 billion tons) (3)
- ○ It went up by about 15%, to 7 billion tons (4)
- ○ It went up by about 30%, to 8 billion tons (5)

know_solar_cost In the US and elsewhere, large solar power plants are built to convert sunlight into electricity for the grid. How has the cost of building such projects has changed over the last 10 years?

- ○ The cost has gone down by around 80% (1)
- ○ The cost has gone down by about 40% (2)
- ○ The cost has stayed about the same (3)
- ○ The cost has gone up by about 40% (4)
- ○ The cost has gone up by about 80% (5)

End of Block: Knowledge of mitigation

Start of Block: No info treatments block

quiz_end That's the end of our knowledge quiz. At the end of the survey we'll tell you the answers and let you know how you did.

we_want_your_opinion Now we want to find out more about your opinion on climate change and what to do about it.

End of Block: No info treatments block

Start of Block: Yes info treatments block

but_first_some_info That's the end of our knowledge quiz. At the end of the survey we'll tell you the answers and let you know how you did.

But first we want to share with you a few facts from our knowledge quiz that many participants find surprising.

End of Block: Yes info treatments block

Start of Block: Information about gas tax

inform_gas_tax We asked you, "How many of the 37 other OECD countries do you think have lower gasoline taxes than the US?"

Your answer was ${know_gas_tax/ChoiceGroup/SelectedChoices}. **${e://Field/gas_tax_msg}**

${e://Field/gas_tax_ans} [Source: US Department of Energy Alternative Fuels Data Center]

Currently, out of the 38 countries in the OECD, the United States has the lowest fuel tax, at $0.18 per gallon. By comparison, 22 OECD countries have a gas tax above $2.00 per gallon, and the UK's tax is $3.49 per gallon.

Raising the gas tax is one way that the US could contribute more to the global fight against climate change. The extra revenue could be used to lower other taxes or invest in clean technology.

End of Block: Information about gas tax

Start of Block: Information about clean energy jobs

inform_jobs We asked you, "${know_jobs/QuestionText}"

Your answer was "${know_jobs/ChoiceGroup/SelectedChoices}." **${e://Field/jobs_msg}**

${e://Field/jobs_ans} [Source: Department of Energy.]

Increasing use of renewable energy is expected to cause further job growth in this sector. Analysts believe that political support from the fast-growing clean energy sector could lead to more proactive climate policy in the future.

End of Block: Information about clean energy jobs

Start of Block: Information about US emissions

inform_us_emissions We asked you, "${know_co2_change/QuestionText}"

Your answer was "${know_co2_change/ChoiceGroup/SelectedChoices}."
${e://Field/us_emissions_msg}

${e://Field/us_emissions_ans} [Source: Global Carbon Project.]

This drop has occurred mainly because we are using less coal, more natural gas, and more renewables. A similar drop has taken place in Europe. Experts say that we can cut a lot more by generating more electricity from low-carbon sources and plugging more of our machinery (cars, industrial boilers, etc) into the electrical grid.

End of Block: Information about US emissions

Start of Block: Information about solar energy cost

inform_solar_cost We asked you, "${know_solar_cost/QuestionText}"

Your answer was
"${know_solar_cost/ChoiceGroup/SelectedChoices}." **${e://Field/solar_cost_msg}**

${e://Field/solar_cost_ans} [Source: The International Renewable Energy Agency (IRENA).]

Building a solar plant has become the cheapest-ever way to generate electricity. Further investment in transmission and storage are necessary to make the best use of cheap and clean power from solar and other renewable sources.

End of Block: Information about solar energy cost

Start of Block: Now back to the survey

Q45 Now we want to find out more about your opinion on climate change and what to do about it.

End of Block: Now back to the survey

Start of Block: Concern, taxes, and efficacy

how_worried How worried are you about climate change?

- ○ Not at all worried (1)
- ○ A little worried (2)
- ○ Moderately worried (3)
- ○ Very worried (4)
- ○ Extremely worried (5)

how_affect_you How much do you think climate change will affect you personally?

- ○ Not at all (1)
- ○ A little (2)
- ○ Somewhat (3)
- ○ A lot (4)
- ○ A great deal (5)

how_affect_US How much do you think climate change will negatively affect people in the United States?

- ○ Not at all (1)
- ○ A little (2)
- ○ Somewhat (3)
- ○ A lot (4)
- ○ A great deal (5)

how_affect_future How much do you think climate change will negatively affect future generations of people?

- ○ Not at all (1)
- ○ A little (2)
- ○ Somewhat (3)
- ○ A lot (4)
- ○ A great deal (5)

Page Break

wtp_taxes Would you be willing to pay higher taxes to support a more aggressive national effort to fight climate change?

- ○ Totally unwilling (1)
- ○ A little willing (2)
- ○ Moderately willing (3)
- ○ Very willing (4)
- ○ Extremely willing (5)

attention_check Some people argue that the risks from climate change have been widely exaggerated. Also, some researchers believe that the responses that come from surveys like this one are not reliable. To show skeptics that respondents to this survey do pay attention, could you please answer **both** "Strongly disagree" and "Neither agree nor disagree" below?

- ☐ Strongly disagree (1)
- ☐ Somewhat disagree (5)
- ☐ Neither agree nor disagree (6)
- ☐ Somewhat agree (2)
- ☐ Strongly agree (7)

believe_can_do_sthg Do you agree or disagree with the following statement? "I believe I can do something to help address the problem of climate change."

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

collective_efficacy Do you agree or disagree with the following statement? "I believe that by working together we can reduce greenhouse gas emissions and address climate change."

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

emissions_prediction The Intergovernmental Panel on Climate Change has stated that to limit global warming to 2 degrees Celsius above pre-industrial levels, global CO2 emissions will need to drop by more than half by 2050. How likely is it that we will cut emissions by at least that amount?

- ○ Definitely not (2)
- ○ Probably not (3)
- ○ Possibly (4)
- ○ Probably (5)
- ○ Very probably (6)
- ○ Definitely (7)

End of Block: Concern, taxes, and efficacy

Start of Block: IRA control group

ira_control_q The Inflation Reduction Act (IRA), which was passed by the US Congress last year, includes provisions that aim to reduce carbon emissions and promote clean energy technologies. The IRA includes:
- Investments in renewable energy
- Support for research and development of new clean technologies
- Protections for vulnerable communities from the impacts of climate change
- Tax credits for electric vehicles and energy-efficient appliances

The IRA is expected to roughly double the US government's annual spending on fighting climate change. The Congressional Budget Office has estimated that the IRA's climate provisions will cost taxpayers $392 billion over 10 years.

Do you think the IRA goes too far or not far enough in addressing climate change?

- ○ Goes much too far (1)
- ○ Goes somewhat too far (2)
- ○ Is about right (3)
- ○ Should go somewhat further (4)
- ○ Should go much further (5)

End of Block: IRA control group

Start of Block: IRA treatment group

ira_treatment_q The Inflation Reduction Act (IRA), which was passed by the US Congress last year, includes provisions that aim to reduce carbon emissions and promote clean energy technologies. The IRA includes:
- Investments in renewable energy
- Support for research and development of new clean technologies
- Protections for vulnerable communities from the impacts of climate change
- Tax credits for electric vehicles and energy-efficient appliances

Many provisions of the IRA are designed to promote American production of green technology. For example, some electric vehicle tax credits only apply if the car and its battery are manufactured in North America.

The IRA is expected to roughly double the US government's annual spending on fighting climate change. The Congressional Budget Office has estimated that the IRA's climate provisions will

cost taxpayers $392 billion over 10 years.

Do you think the IRA goes too far or not far enough in addressing climate change?

- ○ Goes much too far (1)
- ○ Goes somewhat too far (2)
- ○ Is about right (3)
- ○ Should go somewhat further (4)
- ○ Should go much further (5)

End of Block: IRA treatment group

Start of Block: Donate your bonus

donate_amount By taking this survey, you are automatically entered into a lottery to win $100.

You can also choose to donate a part of your bonus payment to a policy advocacy group called **Evergreen Action.** Evergreen Action pushed for many of the climate provisions in the IRA and is currently working on ensuring that these provisions are effectively implemented. (We have no connection to Evergreen Action.)

If you win our lottery, you will receive (as a Prolific bonus payment) $100 minus the amount you choose to donate below, and we will send your donation to Evergreen Action.

Please use the slider below to indicate how much of your lottery winnings (between $0 and $100) you would like us to donate to Evergreen Action, should you win.

	Keep all of it ... Donate all of it 0 10 20 30 40 50 60 70 80 90 100
Donation amount ()	

End of Block: Donate your bonus

Start of Block: Answers to knowledge suvey

quiz_review If you're curious, here are the answers to our knowledge quiz:

Question	Correct answer	Your answer
1	${know_co2_meaning/QuestionText}	${know_co2_meaning/ChoiceDescription/3}
2	${know_main_cause_gw/QuestionText}	${know_main_cause_gw/ChoiceDescription/2}
3	${know_not_gw/QuestionText}	${know_not_gw/ChoiceDescription/4}
4	${know_what_helps/QuestionText}	${know_what_helps/ChoiceDescription/5}
5	${know_renewable/QuestionText}	${know_renewable/ChoiceDescription/3}
6	${know_ira_dcr/QuestionText}	${know_ira_dcr/ChoiceDescription/1}
7	${know_gas_tax/QuestionText}	${know_gas_tax/ChoiceDescription/1}
8	${know_jobs/QuestionText}	${know_jobs/ChoiceDescription/5}
9	${know_co2_change/QuestionText}	${know_co2_change/ChoiceDescription/2}
10	${know_solar_cost/QuestionText}	${know_solar_cost/ChoiceDescription/1}

1. US EPA, "Overview of greenhouse gases" https://www.epa.gov/ghgemissions/overview-greenhouse-gases
2. IPCC, "Climate Change in Data, The physical science basis" https://www.ipcc.ch/report/ar6/wg1/resources/climate-change-in-data/
3. Stephen MacAvoy, "To the point: What Causes Earthquakes, and Is Climate Change Involved?" https://www.american.edu/cas/news/to-the-point-what-causes-earthquakes-and-is-climate-change-involved.cfm
4. IPCC, “Climate change 2022: Mitigation of Climate Change”, https://www.ipcc.ch/report/ar6/wg3/
5. US Energy Information Administration, "Geothermal Explained",

https://www.eia.gov/energyexplained/geothermal/
6. Melissa Barbanell (World Resources Institute), "A Brief Summary of the Climate and Energy Provisions of the Inflation Reduction Act of 2022", https://www.wri.org/update/brief-summary-climate-and-energy-provisions-inflation-reduction-act-2022.
7. US Department of Energy, Alternative Fuels Data Center, "Fuel Taxes by Country", https://afdc.energy.gov/data/10327.
8. US Department of Energy, 2022 U.S. Energy & Employment Jobs Report, https://www.energy.gov/sites/default/files/2022-06/USEER%202022%20Executive%20Summary.pdf.
9. Global Carbon Project, https://www.globalcarbonproject.org/. (Data also available on Our World in Data at https://ourworldindata.org/grapher/annual-co2-emissions-per-country?time=1963..latest&country=~USA.
10. International Renewable Energy Agency, "Renewable Power Generation Costs in 2020", summarized at https://www.weforum.org/agenda/2021/07/renewables-cheapest-energy-source/.

End of Block: Answers to knowledge suvey

Start of Block: Feedback

feedback That's the end of our survey. Thank you very much for your help!

You'll be redirected to Prolific on the next page.

Before you go, feel free to use the text box below to tell us anything you would like us to know about your answers or any feedback you have about our survey.

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_____

_____

_____

_____

End of Block: Feedback

Start of Block: Redirect

redirect_text Thank you for taking part in this study. Please click the button below to be redirected back to Prolific and register your submission.

End of Block: Redirect