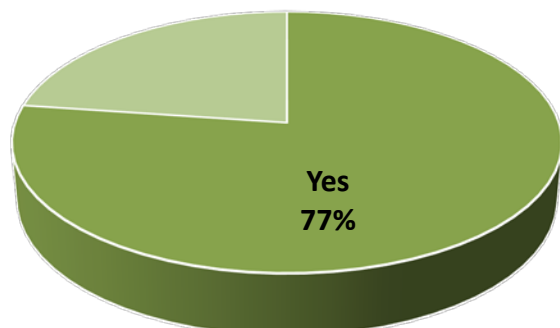


Public Opinion on Global Warming in Michigan: 2013

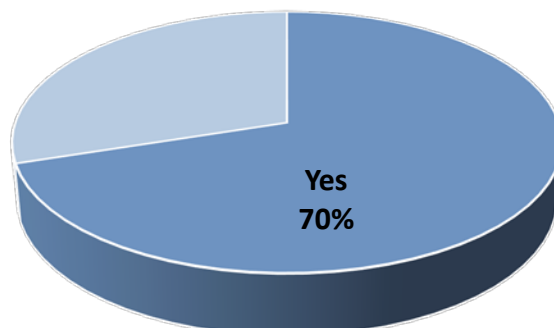
Stanford University conducted surveys that were used to generate measures of public opinion in Michigan today.

Has global warming been happening?



What is your personal opinion? Do you think that the world's temperature probably has been going up slowly over the past 100 years, or do you think this probably has not been happening?

Should government limit greenhouse gas emissions from U.S. businesses?



As you may have heard, greenhouse gases are thought to cause global warming. In your opinion, do you think the government should or should not limit the amount of greenhouse gases that U.S. businesses put out?

FUNDAMENTALS

- Global warming has been happening: **77%**
- Warming will continue in the future: **71%**
- Past warming has been caused by humans: **78%**
- Warming will be a serious problem for the U.S.: **76%**
- Warming will be a serious problem for the world: **78%**
- 5 degrees of warming in 75 years will be bad: **48%**

POLICIES

- Government should limit greenhouse gas emissions from U.S. businesses: **70%**
- U.S. federal government should do more to address warming: **59%**
- U.S. should take action regardless what other countries do: **62%**
- Reduce greenhouse gases from power plants: **76%**
- Favor a national cap and trade program: **64%**
- Favor tax breaks to produce renewable energy: **74%**
- Favor tax breaks to reduce air pollution from coal: **59%**
- Increase fuel economy standards for cars: **73%**
- Build appliances that use less electricity: **72%**
- Build more energy-efficient buildings: **73%**
- Build electric vehicles: **64%**
- Favor tax breaks to build nuclear power plants: **48%**
- Increase consumption taxes on electricity: **25%**
- Increase consumption taxes on gasoline: **23%**

ENGAGEMENT

- Warming is extremely important personally (and is likely to influence voting): **8%**
- Highly knowledgeable about global warming: **57%**

METHODOLOGY:

Michigan public opinion was measured via a series of random digital dial telephone surveys and Internet surveys of nationally representative probability samples of American adults conducted by Stanford University, statistically adjusted for data collection mode, survey topic, and changes in opinions over time.

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For more information, see <http://climatepublicopinion.stanford.edu/>



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Wordings of Survey Questions

Has global warming been happening? **2012-2013:** What is your personal opinion? Do you think that the world's temperature probably has been going up over the past 100 years, or do you think this probably has not been happening? **2012:** What is your personal opinion? Do you think that the world's temperature probably has been going up slowly over the past 100 years, or do you think this probably has not been happening? **2012:** What is your personal opinion? Do you think that the world's temperature probably has been going up over the past 100 years, or do you think this probably has not been happening? **1997-2011:** You may have heard about the idea that the world's temperature may have been going up slowly over the past 100 years. What is your personal opinion on this? Do you think this has probably been happening, or do you think it probably has not been happening?

Warming will continue in the future. **2012:** If nothing is done to prevent it, do you think the world's temperature probably will go up slowly over the next 100 years, or do you think the world's temperature probably will not go up slowly over the next 100 years? **2012:** If nothing is done to prevent it, do you think the world's temperature probably will go up over the next 100 years, or do you think the world's temperature probably will not go up over the next 100 years? **2010-2011:** If nothing is done to prevent it, do you think the world's temperature probably will go up slowly over the next 100 years, or do you think the world's temperature probably will not go up slowly over the next 100 years?

Past warming has been caused by humans. **2012:** Do you think a rise in the world's temperature is being caused mostly by things people do, mostly by natural causes, or about equally by things people do and by natural causes? **2012:** Do you think that the increase in the world's temperature over the past 100 years was caused mostly by things people did, mostly by natural causes, or about equally by things people did and by natural causes? **2012:** Assuming it's happening, do you think a rise in the world's temperature would be caused mostly by things people do, mostly by natural causes, or about equally by things people do and by natural causes? **2012:** If the world's temperature did increase over the past 100 years, do you think this increase was caused mostly by things people did, mostly by natural causes, or about equally by things people did and by natural causes? **1997-2011:** Do you think a rise in the world's temperature is being caused mostly by things people do, mostly by natural causes, or about equally by things people do and by natural causes? **1997-2011:** Assuming it's happening, do you think a rise in the world's temperature would be caused mostly by things people do, mostly by natural causes, or about equally by things people do and by natural causes?

Warming will be a serious problem for the U.S. **2012:** If nothing is done to reduce global warming in the future, how serious of a problem do you think it will be for THE UNITED STATES – very serious, somewhat serious, not so serious, or not serious at all? **2012:** Assuming it's happening, if nothing is done to reduce global warming in the future, how serious of a problem do you think it would be for THE UNITED STATES – very serious, somewhat serious, not so serious, or not serious at all? **1997-2011:** If nothing is done to reduce global warming in the future, how serious of a problem do you think it will be for THE UNITED STATES – very serious, somewhat serious, not so serious, or not serious at all? **1997-2011:** Assuming it's happening, if nothing is done to reduce global warming in the future, how serious of a problem do you think it would be for THE UNITED STATES – very serious, somewhat serious, not so serious, or not serious at all?

Warming will be a serious problem for the world. **2012:** If nothing is done to reduce global warming in the future, how serious of a problem do you think it will be for THE WORLD – very serious, somewhat serious, not so serious, or not serious at all? **2012:** Assuming it's happening, if nothing is done to reduce global warming in the future, how serious of a problem do you think it would be for THE WORLD – very serious, somewhat serious, not so serious, or not serious at all? **1997-2011:** If nothing is done to reduce global warming in the future, how serious of a problem do you think it would be for THE WORLD – very serious, somewhat serious, not so serious, or not serious at all? **1997-2011:** Assuming it's happening, if nothing is done to reduce global warming in the future, how serious of a problem do you think it would be for THE WORLD – very serious, somewhat serious, not so serious, or not serious at all?

5 degrees of warming in 75 years will be bad. **2011-2012:** If the world's average temperature is about five degrees Fahrenheit higher 75 years from now than it is now, overall, would you say that would be good, bad, or neither good nor bad? **1997-2010:** Scientists use the term "global warming" to refer to the idea that the world's average temperature may be about five degrees Fahrenheit higher in 75 years than it is now. Overall, would you say that if the world's average temperature is five degrees Fahrenheit higher in 75 years than it is now, would that be good, bad, or neither good nor bad?

The government should limit greenhouse gas emissions. **2012:** As you may have heard, greenhouse gasses are thought to cause global warming. In your opinion, do you think the government should or should not limit the amount of greenhouse gasses that U.S. businesses put out? **2008-2011:** Some people believe that the United States

government should limit the amount of air pollution that U.S. businesses can produce. Other people believe that the government should not limit air pollution from U.S. businesses. What about you? Do you think the government should or should not limit air pollution from U.S. businesses?

U.S. federal government should do more to address global warming. **2009-2012:** How much do you think the U.S. government should do about global warming? A great deal, quite a bit, some, a little, or nothing? **2009-2012:** How much do you think the U.S. government is doing now to deal with global warming? A great deal, quite a bit, some, a little, or nothing? **2008:** Do you think the federal government should do more than it's doing now to try to deal with global warming, should do less than it's doing now, or is it doing about the right amount?

U.S. should take action regardless what other countries do. Do you think the United States should take action on global warming only if other major industrial countries such as China and India agree to do equally effective things, that the United States should take action even if these other countries do less, or that the United States should not take action on this at all?

Reduce greenhouse gas emissions by power plants. **2012:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Each of these changes would increase the amount of money that you pay for things you buy. Lowering the amount of greenhouse gases that power plants are allowed to release into the air? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Lowering the amount of greenhouse gases that power plants are allowed to release into the air?

Favor a national cap and trade program. There's a proposed system called "cap and trade." The government would issue permits limiting the amount of greenhouse gases companies can put out. Companies that did not use all their permits could sell them to other companies. Companies that need more permits can buy them, or these companies can pay money to reduce the amount of greenhouse gases that other people or organizations put out. This will cause companies to figure out the cheapest way to reduce greenhouse gas emissions. This type of permit system has worked successfully in the past to reduce the air pollution that companies put out. For example, in 1990, the federal government passed a law like this, called the Clean Air Act, which caused companies to put out a lot less of the air pollution that causes acid rain. Would you favor or oppose a cap and trade system to reduce the amount of greenhouse gases that companies put out?

Tax breaks to produce renewable energy. **2012:** For each of the following, please tell me whether you favor or oppose it as a way for the federal government to try to reduce future global warming. Each of these changes would increase the amount of money that you pay for things you buy. Do you favor or oppose the federal government giving companies tax breaks to produce more electricity from water, wind, and solar power? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Do you favor or oppose the federal government giving companies tax breaks to produce more electricity from water, wind, and solar power?

Tax breaks to reduce air pollution from coal. **2012:** For each of the following, please tell me whether you favor or oppose it as a way for the federal government to try to reduce future global warming. Each of these changes would increase the amount of money that you pay for things you buy. Do you favor or oppose the federal government giving tax breaks to companies that burn coal to make electricity if they use new methods to reduce the air pollution being released from their smokestacks? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Do you favor or oppose the federal government giving tax breaks to companies that burn coal to make electricity if they use new methods to put the air pollution they generate into underground storage areas instead of letting that air pollution go up the smokestacks at their factories?

Increase CAFE standards for cars. **2012:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Each of these changes would increase the amount of money that you pay for things you buy. Building cars that use less gasoline? **1997-2011:** For the next items, please tell me for each one whether it's

something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Building cars that use less gasoline?

Build electric vehicles. **2012:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Each of these changes would increase the amount of money that you pay for things you buy. Building cars that run completely on electricity? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Building cars that run completely on electricity?

Build appliances that use less electricity. **2012:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Each of these changes would increase the amount of money that you pay for things you buy. Building air conditioners, refrigerators, and other appliances that use less electricity? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Building air conditioners, refrigerators, and other appliances that use less electricity?

Build more energy-efficient buildings. **2012:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Each of these changes would increase the amount of money that you pay for things you buy. Building new homes and offices that use less energy for heating and cooling? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Building new homes and offices that use less energy for heating and cooling?

Increase consumption taxes on electricity. **2012:** For each of the following, please tell me whether you favor or oppose it as a way for the federal government to try to reduce future global warming. Each of these changes would increase the amount of money that you pay for things you buy. Do you favor or oppose the federal government increasing taxes on electricity so people use less of it? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Do you favor or oppose the federal government increasing taxes on electricity so people use less of it?

Increase consumption taxes on gasoline. **2012:** For each of the following, please tell me whether you favor or oppose it as a way for the federal government to try to reduce future global warming. Each of these changes would increase the amount of money that you pay for things you buy. Do you favor or oppose the federal government increasing taxes on gasoline so people either drive less, or buy cars that use less gas? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Do you favor or oppose the federal government increasing taxes on gasoline so people either drive less, or buy cars that use less gas?

Tax breaks to build nuclear power plants. **2012:** For each of the following, please tell me whether you favor or oppose it as a way for the federal government to try to reduce future global warming. Each of these changes would increase the amount of money that you pay for things you buy. Do you favor or oppose the federal government giving companies tax breaks to build nuclear power plants? **1997-2011:** For the next items, please tell me for each one whether it's something the government should require by law, encourage with tax breaks but not require, or stay out of entirely. Do you favor or oppose the federal government giving companies tax breaks to build nuclear power plants?

Warming is extremely important personally (and is likely to influence voting). How important is the issue of global warming to you personally – extremely important, very important, somewhat important, not too important, or not at all important?

Highly knowledgeable about global warming. How much do you feel you know about global warming – a lot, a moderate amount, a little, or nothing?