YouGov Survey: Energy Sources

1. Do you have a favorable or unfavorable opinion of the following types of energy?

	Very favorable	Somewhat favorable	Somewhat unfavorable	Very unfavorable	Don't know
Fossil fuel energy	22%	25%	17%	17%	20%
Renewable energy	39%	32%	10%	6%	13%
Nuclear energy	21%	28%	18%	11%	22%

2. Do you have a favorable or unfavorable opinion of the following types of energy?

	Very favorable	Somewhat favorable	Somewhat unfavorable	Very unfavorable	Don't know
Coal	18%	22%	17%	26%	17%
Oil	23%	26%	17%	19%	15%
Natural gas (such as methane, ethane, butane, and propane)	25%	34%	16%	8%	16%
Ethanol	10%	30%	23%	9%	27%
Wind power	39%	26%	12%	9%	14%
Solar power	46%	28%	8%	7%	11%
Hydropower	36%	29%	6%	3%	25%
Nuclear fusion energy	22%	23%	13%	7%	35%
Geothermal energy	25%	31%	6%	4%	34%
Tidal energy	20%	24%	7%	5%	44%
Wave energy	21%	25%	9%	5%	41%
Fuel cell energy	15%	28%	9%	5%	44%
Biomass energy (such as wood and plants)	17%	33%	14%	7%	29%
Biofuels (such as feedstock)	12%	33%	13%	6%	36%

3. For the first time, U.S. scientists have been able to produce a fusion reaction that creates more energy than it consumes — a step toward zero-carbon nuclear fusion energy. Do you support or oppose efforts to create zero-carbon nuclear fusion energy?

Strongly support	35%
Somewhat support	29%
Somewhat oppose	8%
Strongly oppose	4%
Not sure	25%

4. Do you think that zero-carbon energy from nuclear fusion will be commercially available in the U.S. in the next 50 years?

Definitely 11%
Probably 38%
Probably not 15%
Definitely not 4%
Not sure 32%

5. On the subject of climate change do you think. . . ?

The world's climate is changing as a result of human activity 54%
The world's climate is changing but NOT because of human activity 22%
The world's climate is NOT changing 9%
Don't know 15%

Interviewing Dates	December 14 - 16, 2022
Target population	U.S. citizens, aged 18 and over.
Sampling method	Respondents were selected from YouGov's opt-in Internet panel using sample matching. A random sample (stratified by gender, age, race, education, geographic region, and voter registration) was selected from the 2019 American Community Survey.
Weighting	The sample was weighted according to gender, age, race, education, 2020 election turnout and Presidential vote, baseline party identification, and current voter registration status. Demographic weighting targets come from the 2019 American Community Survey. Baseline party identification is the respondent's most recent answer given prior to March 15, 2022, and is weighted to the estimated distribution at that time (33% Democratic, 28% Republican). The weights range from 0.313 to 6.502, with a mean of 1 and a standard deviation of 0.549.
Number of respondents	1000
Margin of error	$\pm$ 3.5% (adjusted for weighting)
Survey mode	Web-based interviews
Questions not reported	50 questions not reported.

YouGov Survey: Energy Sources
December 14 - 16, 2022 - 1000 U.S. adult citizens

YouGov

1A. Favorability of Energy Categories — Fossil fuel energy
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	22%	24%	19%	10%	18%	25%	32%	23%	22%	*	*
Somewhat favorable	25%	26%	23%	19%	28%	27%	23%	27%	18%	*	*
Somewhat unfavorable	17%	16%	17%	20%	15%	15%	18%	18%	12%	*	*
Very unfavorable	17%	18%	17%	19%	18%	15%	19%	18%	10%	*	*
Don't know	20%	15%	24%	31%	22%	18%	9%	14%	38%	*	*
Totals	101%	99%	100%	99%	101%	100%	101%	100%	100%	*	*
Unweighted N	(991)	(435)	(556)	(184)	(222)	(340)	(245)	(709)	(134)	(74)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	22%	11%	20%	36%	11%	44%	23%	19%	24%	21%	23%	25%	15%
Somewhat favorable	25%	21%	25%	28%	17%	29%	20%	28%	31%	26%	24%	23%	27%
Somewhat unfavorable	17%	24%	15%	11%	24%	12%	17%	19%	16%	17%	16%	17%	17%
Very unfavorable	17%	28%	16%	7%	35%	5%	16%	23%	18%	20%	15%	16%	20%
Don't know	20%	17%	23%	17%	13%	10%	24%	11%	11%	17%	21%	19%	20%
Totals	101%	101%	99%	99%	100%	100%	100%	100%	100%	101%	99%	100%	99%
Unweighted N	(991)	(358)	(375)	(258)	(375)	(324)	(392)	(255)	(236)	(175)	(217)	(381)	(218)

YouGov Survey: Energy Sources
December 14 - 16, 2022 - 1000 U.S. adult citizens

YouGov

1B. Favorability of Energy Categories — Renewable energy
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	39%	42%	36%	38%	32%	38%	46%	39%	41%	*	*
Somewhat favorable	32%	30%	34%	30%	32%	36%	29%	33%	27%	*	*
Somewhat unfavorable	10%	11%	9%	10%	13%	7%	10%	10%	9%	*	*
Very unfavorable	6%	6%	6%	4%	7%	6%	6%	7%	3%	*	*
Don't know	13%	11%	16%	18%	15%	13%	8%	11%	20%	*	*
Totals	100%	100%	101%	100%	99%	100%	99%	100%	100%	*	*
Unweighted N	(993)	(435)	(558)	(183)	(223)	(340)	(247)	(709)	(134)	(76)	(74)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	39%	59%	32%	24%	65%	25%	35%	52%	39%	36%	42%	35%	44%
Somewhat favorable	32%	25%	33%	39%	22%	41%	30%	32%	39%	35%	30%	35%	27%
Somewhat unfavorable	10%	8%	10%	12%	5%	14%	9%	8%	12%	10%	7%	11%	10%
Very unfavorable	6%	1%	6%	11%	2%	12%	7%	5%	5%	5%	8%	5%	7%
Don't know	13%	8%	18%	14%	6%	8%	19%	3%	5%	14%	14%	14%	12%
Totals	100%	101%	99%	100%	100%	100%	100%	100%	100%	100%	101%	100%	100%
Unweighted N	(993)	(359)	(377)	(257)	(375)	(327)	(392)	(256)	(237)	(176)	(217)	(382)	(218)

YouGov Survey: Energy Sources
December 14 - 16, 2022 - 1000 U.S. adult citizens

YouGov

1C. Favorability of Energy Categories — Nuclear energy
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	21%	31%	11%	18%	16%	22%	27%	21%	18%	*	*
Somewhat favorable	28%	30%	26%	26%	30%	25%	32%	30%	22%	*	*
Somewhat unfavorable	18%	14%	22%	15%	21%	17%	20%	20%	19%	*	*
Very unfavorable	11%	9%	13%	11%	9%	15%	9%	12%	9%	*	*
Don't know	22%	16%	28%	30%	25%	21%	12%	17%	31%	*	*
Totals	100%	100%	100%	100%	101%	100%	100%	100%	99%	*	*
Unweighted N	(992)	(436)	(556)	(184)	(222)	(340)	(246)	(710)	(134)	(74)	(74)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	21%	16%	20%	27%	17%	41%	20%	21%	24%	19%	21%	21%	20%
Somewhat favorable	28%	26%	31%	25%	30%	28%	23%	32%	35%	24%	29%	28%	28%
Somewhat unfavorable	18%	25%	13%	18%	23%	13%	20%	15%	20%	29%	13%	19%	14%
Very unfavorable	11%	15%	9%	9%	14%	6%	12%	15%	8%	10%	13%	9%	14%
Don't know	22%	17%	27%	21%	16%	13%	25%	16%	13%	18%	24%	22%	23%
Totals	100%	99%	100%	100%	100%	101%	100%	99%	100%	100%	100%	99%	99%
Unweighted N	(992)	(358)	(379)	(255)	(375)	(325)	(391)	(256)	(236)	(176)	(217)	(381)	(218)

YouGov Survey: Energy Sources
December 14 - 16, 2022 - 1000 U.S. adult citizens

2A. Favorability of Energy Types — Coal
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	18%	22%	15%	10%	17%	23%	20%	20%	13%	*	*
Somewhat favorable	22%	23%	21%	20%	27%	19%	23%	25%	19%	*	*
Somewhat unfavorable	17%	15%	19%	19%	18%	16%	18%	18%	15%	*	*
Very unfavorable	26%	27%	24%	25%	17%	28%	33%	26%	22%	*	*
Don't know	17%	13%	20%	26%	22%	14%	7%	12%	31%	*	*
Totals	100%	100%	99%	100%	101%	100%	101%	101%	100%	*	*
Unweighted N	(977)	(427)	(550)	(178)	(219)	(338)	(242)	(701)	(130)	(72)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	18%	10%	15%	32%	8%	36%	20%	19%	17%	18%	22%	18%	15%
Somewhat favorable	22%	14%	23%	31%	11%	31%	21%	24%	24%	21%	20%	24%	22%
Somewhat unfavorable	17%	20%	16%	16%	19%	17%	15%	20%	21%	17%	19%	16%	19%
Very unfavorable	26%	43%	24%	7%	51%	8%	24%	30%	27%	24%	27%	25%	27%
Don't know	17%	13%	21%	14%	11%	8%	19%	9%	11%	20%	12%	17%	17%
Totals	100%	100%	99%	100%	100%	100%	99%	102%	100%	100%	100%	100%	100%
Unweighted N	(977)	(352)	(371)	(254)	(370)	(325)	(383)	(256)	(233)	(175)	(212)	(376)	(214)

YouGov Survey: Energy Sources
December 14 - 16, 2022 - 1000 U.S. adult citizens

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2B. Favorability of Energy Types — Oil
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	23%	26%	20%	11%	21%	27%	30%	26%	18%	*	*
Somewhat favorable	26%	26%	26%	22%	29%	27%	26%	28%	29%	*	*
Somewhat unfavorable	17%	18%	17%	21%	17%	14%	19%	18%	13%	*	*
Very unfavorable	19%	18%	20%	21%	13%	22%	19%	20%	13%	*	*
Don't know	15%	13%	17%	25%	20%	10%	6%	9%	28%	*	*
Totals	100%	101%	100%	100%	100%	100%	100%	101%	101%	*	*
Unweighted N	(976)	(431)	(545)	(181)	(218)	(331)	(246)	(698)	(131)	(74)	(73)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	23%	12%	21%	39%	11%	49%	22%	26%	24%	24%	25%	24%	19%
Somewhat favorable	26%	19%	27%	33%	16%	30%	24%	25%	31%	23%	25%	29%	24%
Somewhat unfavorable	17%	25%	15%	10%	24%	11%	19%	18%	17%	14%	17%	18%	19%
Very unfavorable	19%	33%	17%	5%	40%	4%	19%	22%	17%	22%	19%	16%	21%
Don't know	15%	11%	20%	12%	10%	6%	15%	8%	11%	17%	15%	13%	17%
Totals	100%	100%	100%	99%	101%	100%	99%	99%	100%	100%	101%	100%	100%
Unweighted N	(976)	(354)	(369)	(253)	(373)	(319)	(385)	(252)	(233)	(174)	(215)	(369)	(218)

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YouGov Survey: Energy Sources
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2C. Favorability of Energy Types — Natural gas (such as methane, ethane, butane, and propane)
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	25%	31%	20%	11%	19%	32%	35%	28%	20%	*	*
Somewhat favorable	34%	34%	35%	31%	39%	31%	37%	36%	41%	*	*
Somewhat unfavorable	16%	15%	16%	18%	15%	16%	14%	16%	8%	*	*
Very unfavorable	8%	8%	9%	12%	10%	8%	6%	7%	10%	*	*
Don't know	16%	13%	20%	28%	18%	13%	8%	12%	21%	*	*
Totals	99%	101%	100%	100%	101%	100%	100%	99%	100%	*	*
Unweighted N	(974)	(427)	(547)	(178)	(219)	(331)	(246)	(697)	(130)	(73)	(74)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	25%	15%	22%	43%	13%	52%	23%	26%	29%	25%	31%	25%	21%
Somewhat favorable	34%	37%	34%	32%	36%	30%	33%	38%	37%	27%	34%	39%	33%
Somewhat unfavorable	16%	24%	15%	7%	26%	6%	16%	15%	18%	20%	15%	11%	21%
Very unfavorable	8%	12%	8%	5%	13%	4%	10%	9%	7%	13%	8%	8%	7%
Don't know	16%	13%	22%	12%	12%	7%	18%	12%	8%	15%	12%	18%	18%
Totals	99%	101%	101%	99%	100%	99%	100%	100%	99%	100%	100%	101%	100%
Unweighted N	(974)	(351)	(370)	(253)	(371)	(322)	(380)	(255)	(233)	(175)	(214)	(370)	(215)

YouGov Survey: Energy Sources
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2D. Favorability of Energy Types — Ethanol
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	10%	13%	8%	7%	13%	10%	10%	10%	15%	*	*
Somewhat favorable	30%	34%	26%	24%	33%	26%	37%	33%	30%	*	*
Somewhat unfavorable	23%	26%	21%	26%	19%	27%	19%	24%	11%	*	*
Very unfavorable	9%	10%	9%	8%	7%	10%	12%	9%	11%	*	*
Don't know	27%	18%	36%	35%	28%	26%	22%	24%	33%	*	*
Totals	99%	101%	100%	100%	100%	99%	100%	100%	100%	*	*
Unweighted N	(977)	(425)	(552)	(181)	(217)	(333)	(246)	(698)	(131)	(74)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	10%	10%	8%	15%	9%	17%	10%	11%	13%	10%	12%	9%	10%
Somewhat favorable	30%	26%	30%	34%	22%	36%	25%	32%	34%	28%	33%	31%	26%
Somewhat unfavorable	23%	28%	23%	17%	32%	18%	25%	20%	25%	25%	21%	26%	20%
Very unfavorable	9%	10%	10%	7%	11%	11%	8%	12%	12%	7%	10%	10%	10%
Don't know	27%	26%	29%	26%	26%	18%	32%	24%	15%	30%	24%	24%	35%
Totals	99%	100%	100%	99%	100%	100%	100%	99%	99%	100%	100%	100%	101%
Unweighted N	(977)	(354)	(369)	(254)	(374)	(320)	(384)	(255)	(233)	(174)	(213)	(374)	(216)

YouGov Survey: Energy Sources
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2E. Favorability of Energy Types — Wind power
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	39%	42%	35%	37%	32%	40%	46%	38%	40%	*	*
Somewhat favorable	26%	25%	28%	24%	34%	25%	23%	30%	21%	*	*
Somewhat unfavorable	12%	13%	12%	9%	11%	14%	13%	13%	4%	*	*
Very unfavorable	9%	9%	9%	8%	7%	9%	13%	10%	8%	*	*
Don't know	14%	12%	16%	23%	16%	12%	5%	10%	26%	*	*
Totals	100%	101%	100%	101%	100%	100%	100%	101%	99%	*	*
Unweighted N	(984)	(431)	(553)	(184)	(218)	(336)	(246)	(705)	(132)	(73)	(74)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	39%	59%	32%	24%	66%	24%	37%	50%	37%	33%	39%	36%	46%
Somewhat favorable	26%	22%	28%	29%	18%	28%	23%	25%	35%	33%	27%	26%	21%
Somewhat unfavorable	12%	5%	11%	21%	4%	21%	12%	10%	17%	14%	11%	13%	11%
Very unfavorable	9%	4%	9%	15%	3%	20%	10%	10%	8%	6%	11%	10%	7%
Don't know	14%	10%	20%	11%	9%	6%	19%	5%	4%	15%	12%	14%	15%
Totals	100%	100%	100%	100%	100%	99%	101%	100%	101%	101%	100%	99%	100%
Unweighted N	(984)	(357)	(372)	(255)	(373)	(322)	(389)	(254)	(235)	(173)	(218)	(376)	(217)

YouGov Survey: Energy Sources
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YouGov

2F. Favorability of Energy Types — Solar power
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	46%	48%	44%	44%	38%	48%	53%	44%	50%	*	*
Somewhat favorable	28%	28%	29%	28%	31%	27%	28%	31%	21%	*	*
Somewhat unfavorable	8%	8%	7%	6%	10%	9%	5%	9%	8%	*	*
Very unfavorable	7%	7%	6%	4%	7%	7%	9%	8%	2%	*	*
Don't know	11%	9%	13%	18%	13%	10%	4%	8%	19%	*	*
Totals	100%	100%	99%	100%	99%	101%	99%	100%	100%	*	*
Unweighted N	(984)	(430)	(554)	(182)	(218)	(337)	(247)	(702)	(134)	(74)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	46%	68%	37%	33%	71%	34%	43%	55%	48%	39%	53%	42%	51%
Somewhat favorable	28%	18%	33%	33%	17%	34%	29%	23%	36%	30%	24%	34%	22%
Somewhat unfavorable	8%	3%	8%	13%	3%	14%	7%	7%	10%	9%	9%	9%	5%
Very unfavorable	7%	3%	7%	11%	2%	13%	6%	8%	4%	9%	9%	5%	6%
Don't know	11%	7%	15%	9%	6%	5%	15%	7%	1%	13%	6%	10%	16%
Totals	100%	99%	100%	99%	99%	100%	100%	100%	99%	100%	101%	100%	100%
Unweighted N	(984)	(357)	(372)	(255)	(374)	(322)	(387)	(256)	(234)	(174)	(216)	(374)	(220)

YouGov Survey: Energy Sources
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YouGov

2G. Favorability of Energy Types — Hydropower
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	36%	46%	27%	34%	28%	38%	45%	38%	27%	*	*
Somewhat favorable	29%	25%	33%	24%	28%	30%	34%	30%	25%	*	*
Somewhat unfavorable	6%	6%	6%	6%	14%	3%	3%	7%	7%	*	*
Very unfavorable	3%	3%	3%	5%	5%	3%	2%	3%	6%	*	*
Don't know	25%	19%	30%	30%	26%	26%	16%	21%	34%	*	*
Totals	99%	99%	99%	99%	101%	100%	100%	99%	99%	*	*
Unweighted N	(969)	(425)	(544)	(178)	(217)	(332)	(242)	(693)	(129)	(73)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	36%	37%	37%	34%	44%	44%	34%	43%	40%	36%	34%	37%	38%
Somewhat favorable	29%	30%	30%	27%	28%	29%	22%	33%	39%	24%	35%	27%	31%
Somewhat unfavorable	6%	7%	6%	7%	6%	7%	7%	5%	7%	9%	6%	6%	5%
Very unfavorable	3%	4%	2%	5%	3%	3%	4%	5%	2%	4%	6%	2%	3%
Don't know	25%	23%	25%	27%	19%	17%	33%	16%	13%	27%	20%	28%	22%
Totals	99%	101%	100%	100%	100%	100%	100%	102%	101%	100%	101%	100%	99%
Unweighted N	(969)	(351)	(369)	(249)	(368)	(319)	(380)	(253)	(232)	(171)	(211)	(369)	(218)

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2H. Favorability of Energy Types — Nuclear fusion energy
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	22%	32%	13%	20%	16%	22%	30%	23%	15%	*	*
Somewhat favorable	23%	27%	20%	24%	26%	19%	25%	24%	21%	*	*
Somewhat unfavorable	13%	12%	14%	15%	15%	11%	9%	14%	7%	*	*
Very unfavorable	7%	6%	9%	5%	10%	10%	4%	7%	10%	*	*
Don't know	35%	24%	45%	36%	33%	38%	31%	32%	47%	*	*
Totals	100%	101%	101%	100%	100%	100%	99%	100%	100%	*	*
Unweighted N	(976)	(425)	(551)	(178)	(216)	(335)	(247)	(700)	(129)	(73)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	22%	19%	24%	22%	23%	33%	17%	24%	31%	19%	23%	22%	23%
Somewhat favorable	23%	21%	25%	22%	25%	26%	20%	29%	28%	25%	23%	22%	24%
Somewhat unfavorable	13%	15%	10%	14%	12%	11%	15%	11%	11%	13%	12%	14%	11%
Very unfavorable	7%	11%	5%	8%	9%	5%	10%	8%	5%	10%	8%	7%	7%
Don't know	35%	35%	36%	34%	31%	25%	38%	29%	25%	34%	35%	35%	36%
Totals	100%	101%	100%	100%	100%	100%	100%	101%	100%	101%	101%	100%	101%
Unweighted N	(976)	(352)	(371)	(253)	(374)	(321)	(385)	(254)	(232)	(172)	(214)	(375)	(215)

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2I. Favorability of Energy Types — Geothermal energy
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	25%	33%	17%	16%	21%	30%	30%	28%	16%	*	*
Somewhat favorable	31%	34%	27%	31%	32%	27%	33%	32%	24%	*	*
Somewhat unfavorable	6%	6%	7%	5%	11%	5%	5%	6%	4%	*	*
Very unfavorable	4%	3%	5%	7%	6%	2%	2%	3%	9%	*	*
Don't know	34%	24%	44%	41%	30%	36%	30%	31%	47%	*	*
Totals	100%	100%	100%	100%	100%	100%	100%	100%	100%	*	*
Unweighted N	(970)	(427)	(543)	(179)	(217)	(332)	(242)	(695)	(130)	(71)	(74)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	25%	28%	25%	21%	35%	29%	20%	34%	30%	21%	31%	21%	28%
Somewhat favorable	31%	25%	34%	33%	28%	35%	27%	27%	39%	33%	31%	32%	27%
Somewhat unfavorable	6%	11%	3%	5%	7%	5%	6%	6%	9%	10%	5%	5%	8%
Very unfavorable	4%	3%	4%	6%	3%	4%	7%	2%	3%	3%	4%	4%	4%
Don't know	34%	34%	34%	35%	27%	27%	40%	31%	19%	33%	29%	39%	33%
Totals	100%	101%	100%	100%	100%	100%	100%	100%	100%	100%	100%	101%	100%
Unweighted N	(970)	(355)	(364)	(251)	(371)	(316)	(382)	(251)	(234)	(172)	(215)	(367)	(216)

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2J. Favorability of Energy Types — Tidal energy
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	20%	26%	14%	20%	15%	22%	21%	21%	12%	*	*
Somewhat favorable	24%	27%	21%	29%	31%	18%	21%	25%	20%	*	*
Somewhat unfavorable	7%	9%	5%	8%	10%	3%	7%	7%	10%	*	*
Very unfavorable	5%	5%	5%	6%	6%	4%	5%	5%	4%	*	*
Don't know	44%	33%	55%	37%	38%	52%	46%	43%	54%	*	*
Totals	100%	100%	100%	100%	100%	99%	100%	101%	100%	*	*
Unweighted N	(974)	(425)	(549)	(178)	(219)	(332)	(245)	(696)	(131)	(73)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	20%	28%	19%	11%	33%	14%	16%	26%	24%	23%	18%	17%	23%
Somewhat favorable	24%	21%	28%	23%	19%	26%	22%	24%	29%	23%	24%	27%	21%
Somewhat unfavorable	7%	6%	6%	9%	5%	9%	5%	5%	10%	6%	5%	8%	6%
Very unfavorable	5%	6%	3%	7%	4%	7%	6%	7%	3%	7%	5%	4%	6%
Don't know	44%	39%	44%	50%	39%	43%	50%	39%	33%	42%	48%	43%	44%
Totals	100%	100%	100%	100%	100%	99%	99%	101%	99%	101%	100%	99%	100%
Unweighted N	(974)	(353)	(370)	(251)	(372)	(318)	(384)	(253)	(233)	(171)	(212)	(374)	(217)

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2K. Favorability of Energy Types — Wave energy
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	21%	29%	14%	20%	22%	21%	22%	23%	16%	*	*
Somewhat favorable	25%	26%	24%	30%	24%	22%	25%	24%	16%	*	*
Somewhat unfavorable	9%	9%	8%	10%	11%	7%	6%	7%	8%	*	*
Very unfavorable	5%	5%	4%	6%	5%	4%	5%	5%	6%	*	*
Don't know	41%	31%	50%	34%	37%	47%	42%	40%	53%	*	*
Totals	101%	100%	100%	100%	99%	101%	100%	99%	99%	*	*
Unweighted N	(982)	(432)	(550)	(180)	(218)	(338)	(246)	(703)	(131)	(74)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	21%	29%	19%	15%	35%	17%	18%	28%	23%	22%	20%	18%	27%
Somewhat favorable	25%	22%	29%	22%	24%	27%	23%	25%	30%	23%	25%	25%	27%
Somewhat unfavorable	9%	7%	10%	8%	5%	10%	10%	6%	11%	12%	5%	11%	5%
Very unfavorable	5%	3%	4%	8%	2%	7%	6%	5%	2%	5%	4%	6%	3%
Don't know	41%	39%	38%	46%	34%	39%	43%	36%	34%	39%	46%	40%	38%
Totals	101%	100%	100%	99%	100%	100%	100%	100%	100%	101%	100%	100%	100%
Unweighted N	(982)	(354)	(373)	(255)	(373)	(323)	(385)	(256)	(235)	(176)	(215)	(374)	(217)

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2L. Favorability of Energy Types — Fuel cell energy
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	15%	20%	9%	14%	15%	13%	17%	14%	16%	*	*
Somewhat favorable	28%	32%	24%	24%	31%	24%	31%	30%	25%	*	*
Somewhat unfavorable	9%	11%	8%	13%	9%	10%	6%	10%	5%	*	*
Very unfavorable	5%	4%	5%	4%	5%	5%	4%	4%	4%	*	*
Don't know	44%	34%	54%	45%	40%	48%	42%	41%	50%	*	*
Totals	101%	101%	100%	100%	100%	100%	100%	99%	100%	*	*
Unweighted N	(973)	(427)	(546)	(179)	(217)	(333)	(244)	(698)	(128)	(74)	(73)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	15%	17%	12%	15%	17%	20%	13%	19%	18%	14%	14%	14%	17%
Somewhat favorable	28%	28%	27%	28%	30%	29%	25%	28%	35%	26%	29%	27%	29%
Somewhat unfavorable	9%	11%	8%	9%	10%	10%	7%	12%	12%	12%	9%	9%	8%
Very unfavorable	5%	3%	5%	6%	2%	7%	7%	2%	3%	5%	4%	5%	3%
Don't know	44%	41%	48%	41%	41%	34%	48%	39%	33%	43%	44%	45%	43%
Totals	101%	100%	100%	99%	100%	100%	100%	100%	101%	100%	100%	100%	100%
Unweighted N	(973)	(353)	(368)	(252)	(370)	(320)	(380)	(251)	(236)	(174)	(211)	(373)	(215)

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2M. Favorability of Energy Types — Biomass energy (such as wood and plants)
Do you have a favorable or unfavorable opinion of the following types of energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	17%	23%	11%	18%	16%	16%	18%	17%	24%	*	*
Somewhat favorable	33%	33%	34%	25%	36%	36%	34%	36%	22%	*	*
Somewhat unfavorable	14%	16%	13%	20%	9%	13%	17%	13%	14%	*	*
Very unfavorable	7%	7%	6%	4%	10%	7%	6%	7%	5%	*	*
Don't know	29%	22%	36%	32%	29%	28%	26%	26%	35%	*	*
Totals	100%	101%	100%	99%	100%	100%	101%	99%	100%	*	*
Unweighted N	(975)	(430)	(545)	(180)	(218)	(334)	(243)	(697)	(130)	(74)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	17%	16%	14%	22%	14%	26%	20%	19%	16%	12%	19%	19%	15%
Somewhat favorable	33%	33%	35%	31%	33%	38%	27%	38%	42%	39%	33%	30%	35%
Somewhat unfavorable	14%	18%	13%	12%	20%	8%	16%	12%	16%	18%	11%	14%	15%
Very unfavorable	7%	8%	6%	7%	7%	8%	6%	8%	7%	7%	6%	6%	7%
Don't know	29%	26%	32%	28%	27%	20%	30%	24%	19%	25%	30%	31%	27%
Totals	100%	101%	100%	100%	101%	100%	99%	101%	100%	101%	99%	100%	99%
Unweighted N	(975)	(352)	(369)	(254)	(368)	(321)	(383)	(253)	(232)	(170)	(215)	(373)	(217)

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2N. Favorability of Energy Types — Biofuels (such as feedstock)
Do you have a favorable or unfavorable opinion of the following types of energy?

		Gender		Age (4 category)				Race (4 category)			
	Total	Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Very favorable	12%	18%	7%	12%	14%	12%	11%	12%	21%	*	*
Somewhat favorable	33%	37%	29%	22%	33%	34%	41%	38%	20%	*	*
Somewhat unfavorable	13%	11%	14%	16%	12%	11%	13%	14%	6%	*	*
Very unfavorable	6%	8%	5%	4%	9%	6%	5%	6%	8%	*	*
Don't know	36%	26%	45%	45%	32%	37%	30%	30%	45%	*	*
Totals	100%	100%	100%	99%	100%	100%	100%	100%	100%	*	*
Unweighted N	(981)	(432)	(549)	(182)	(221)	(335)	(243)	(701)	(132)	(74)	(74)

		Party ID			2020 Vote		Family Income (3 category)			Census Region			
	Total	Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Very favorable	12%	13%	10%	15%	15%	17%	11%	17%	15%	9%	16%	12%	12%
Somewhat favorable	33%	33%	33%	32%	34%	38%	27%	35%	40%	35%	31%	32%	35%
Somewhat unfavorable	13%	15%	11%	12%	15%	12%	13%	12%	15%	15%	11%	13%	12%
Very unfavorable	6%	7%	5%	7%	6%	7%	6%	7%	7%	8%	5%	6%	6%
Don't know	36%	32%	40%	34%	31%	26%	42%	29%	23%	32%	37%	38%	35%
Totals	100%	100%	99%	100%	101%	100%	99%	100%	100%	99%	100%	101%	100%
Unweighted N	(981)	(353)	(372)	(256)	(370)	(324)	(386)	(254)	(234)	(173)	(216)	(376)	(216)

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3. Support Zero-Carbon Nuclear Fusion Energy
For the first time, U.S. scientists have been able to produce a fusion reaction that creates more energy than it consumes — a step toward zero-carbon nuclear fusion energy. Do you support or oppose efforts to create zero-carbon nuclear fusion energy?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Strongly support	35%	43%	26%	27%	28%	38%	44%	36%	32%	*	*
Somewhat support	29%	26%	31%	34%	30%	26%	27%	29%	29%	*	*
Somewhat oppose	8%	9%	7%	13%	10%	5%	4%	6%	9%	*	*
Strongly oppose	4%	4%	5%	4%	7%	4%	3%	5%	3%	*	*
Not sure	25%	17%	32%	22%	25%	27%	23%	24%	27%	*	*
Totals	101%	99%	101%	100%	100%	100%	101%	100%	100%	*	*
Unweighted N	(993)	(436)	(557)	(183)	(224)	(339)	(247)	(709)	(134)	(76)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Strongly support	35%	46%	32%	26%	50%	35%	29%	44%	42%	32%	37%	34%	36%
Somewhat support	29%	27%	29%	30%	26%	30%	25%	31%	29%	28%	32%	27%	29%
Somewhat oppose	8%	6%	9%	8%	5%	6%	11%	5%	7%	9%	7%	9%	6%
Strongly oppose	4%	4%	2%	9%	3%	6%	4%	4%	8%	4%	6%	2%	6%
Not sure	25%	17%	29%	27%	16%	22%	32%	16%	14%	26%	19%	28%	23%
Totals	101%	100%	101%	100%	100%	99%	101%	100%	100%	99%	101%	100%	100%
Unweighted N	(993)	(357)	(377)	(259)	(375)	(325)	(396)	(253)	(236)	(178)	(218)	(378)	(219)

4. Zero-Carbon Nuclear Fusion Energy Available

Do you think that zero-carbon energy from nuclear fusion will be commercially available in the U.S. in the next 50 years?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
Definitely	11%	14%	8%	10%	12%	11%	12%	10%	16%	*	*
Probably	38%	39%	37%	37%	34%	35%	47%	40%	31%	*	*
Probably not	15%	15%	15%	20%	14%	13%	14%	18%	8%	*	*
Definitely not	4%	5%	4%	3%	9%	3%	2%	4%	4%	*	*
Not sure	32%	27%	36%	30%	30%	38%	25%	28%	41%	*	*
Totals	100%	100%	100%	100%	99%	100%	100%	100%	100%	*	*
Unweighted N	(997)	(438)	(559)	(183)	(226)	(341)	(247)	(713)	(134)	(76)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Definitely	11%	17%	8%	9%	17%	11%	11%	13%	13%	12%	11%	12%	10%
Probably	38%	42%	37%	35%	43%	38%	37%	40%	43%	42%	37%	34%	42%
Probably not	15%	12%	14%	20%	13%	18%	15%	14%	16%	13%	16%	15%	16%
Definitely not	4%	4%	5%	4%	3%	6%	5%	3%	6%	5%	5%	4%	4%
Not sure	32%	25%	36%	32%	25%	26%	33%	29%	22%	28%	31%	36%	28%
Totals	100%	100%	100%	100%	101%	99%	101%	99%	100%	100%	100%	101%	100%
Unweighted N	(997)	(357)	(379)	(261)	(375)	(328)	(396)	(256)	(236)	(178)	(218)	(382)	(219)

5. Opinion of Climate Change
On the subject of climate change do you think. . . ?

	Total	Gender		Age (4 category)				Race (4 category)			
		Male	Female	18-29	30-44	45-64	65+	White	Black	Hispanic	Other
The world's climate is changing as a result of human activity	54%	50%	58%	56%	56%	51%	53%	52%	55%	*	*
The world's climate is changing but NOT because of human activity	22%	25%	19%	12%	16%	28%	30%	26%	14%	*	*
The world's climate is NOT changing	9%	11%	8%	9%	10%	9%	10%	10%	8%	*	*
Don't know	15%	14%	15%	22%	19%	11%	8%	11%	22%	*	*
Totals	100%	100%	100%	99%	101%	99%	101%	99%	99%	*	*
Unweighted N	(994)	(437)	(557)	(182)	(224)	(340)	(248)	(711)	(133)	(76)	(74)

	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
The world's climate is changing as a result of human activity	54%	78%	47%	36%	82%	26%	51%	57%	62%	57%	56%	51%	54%
The world's climate is changing but NOT because of human activity	22%	9%	24%	35%	7%	45%	21%	28%	25%	19%	28%	22%	19%
The world's climate is NOT changing	9%	6%	8%	16%	4%	17%	11%	7%	9%	9%	9%	8%	13%
Don't know	15%	8%	21%	12%	7%	12%	17%	8%	4%	15%	8%	19%	14%

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	Total	Party ID			2020 Vote		Family Income (3 category)			Census Region			
		Dem	Ind	Rep	Biden	Trump	< $50K	$50-100K	$100K+	Northeast	Midwest	South	West
Totals	100%	101%	100%	99%	100%	100%	100%	100%	100%	100%	101%	100%	100%
Unweighted N	(994)	(357)	(379)	(258)	(376)	(325)	(394)	(256)	(236)	(177)	(217)	(380)	(220)

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Interviewing Dates	December 14 - 16, 2022
Target population	U.S. citizens, aged 18 and over.
Sampling method	Respondents were selected from YouGov's opt-in Internet panel using sample matching. A random sample (stratified by gender, age, race, education, geographic region, and voter registration) was selected from the 2019 American Community Survey.
Weighting	The sample was weighted according to gender, age, race, education, 2020 election turnout and Presidential vote, baseline party identification, and current voter registration status. Demographic weighting targets come from the 2019 American Community Survey. Baseline party identification is the respondent's most recent answer given prior to March 15, 2022, and is weighted to the estimated distribution at that time (33% Democratic, 28% Republican). The weights range from 0.313 to 6.502, with a mean of 1 and a standard deviation of 0.549.
Number of respondents	1000
Margin of error	$\pm$ 3.5% (adjusted for weighting)
Survey mode	Web-based interviews
Questions not reported	50 questions not reported.