

SEIA Solar Energy Messaging Survey

Research Methodology

Online Survey

Global Strategy Group conducted an online survey between **June 14-23, 2022**. The survey included **803** Registered Voters Nationwide plus oversamples to achieve:

- **631** Center-Right registered Voters Nationwide
- **343** Opinion Leaders Nationwide

The margin of error at the 95% confidence level is **+/- 3.5%**. The margin of error on sub-samples is greater.

Where questions were consistent, we also tracked the changes between our 2018 Solar Messaging survey and the 2022 survey.

Key Findings

- **Solar is top of mind and voters' first choice as a source for electricity.** Vast majorities hold a favorable opinion of solar energy, the solar industry, and of their electric utility using more solar. In fact, voters want their utility to increase its use of solar more than any other energy source, with no change in this view from 2018.
- **Solar is still overwhelmingly seen as clean, and good for the environment, but some decline since 2018.** While voters across the political spectrum overwhelmingly view solar as clean, helping in reducing air pollution, and helping for addressing climate change, there has been a slight decrease in these sentiments since 2018.
- **Some gains on cost since 2018, but skepticism about cost and jobs remain our largest obstacle.** Sixty percent of voters now agree that solar power “is affordable,” a 6-point increase since 2018. Still, agreement with this, particularly strong agreement, is far lower than many other metrics. Meanwhile, while there has been a 6-point drop in the percentage agreeing that solar is “good for America’s economy” this is still at a robust 75%. As we saw in 2018, however, agreement that solar “creates good-paying jobs” is a bit lower, at 66% - the same as in 2018.
- **Still strong support for government action in support of solar. Slight increase in interest in getting panels installed.** About three-quarters agree that the government should be doing more to encourage the use of solar power, down slightly from 2018. Meanwhile, 60% are now interested in installing solar panels on their home – up five points since 2018.

Key Findings

- **Opinion Leaders remain a champion audience. Center-right broadly supportive but much less intensity, particularly around economic metrics.** Our higher-educated, higher-income and more informed audience, unsurprisingly, is more receptive to the benefits of solar across the board. They find our messages more convincing overall than voters nationwide. Voters on the center-right are also broadly pro-solar, but with much less intensity, particularly around cost and other economic metrics, though our messaging is effective at moving these voters.
- **Our messaging moves the needle, especially on costs and jobs.** We see solid gains on most metrics after our positive messaging, particularly on the belief that solar power is affordable and creates good-paying jobs. The largest gains are with center-right voters, white women, and white non-college voters - many increased support on key metrics. And encouragingly, positive messages were generally more convincing than our opponents' negative ones, suggesting there is a baseline of support the industry can rely on.
- **Opposition messaging generates real concern that can't be ignored, but a strong majority remains supportive of solar in their communities after attacks.** Opposition messaging does generate concern with over 60 percent of voters, which clearly can help opponents throw up obstacles to local solar projects. But the attacks don't generate a ton of intensity and, most important, solar remains overwhelmingly popular after these attacks with more than 70% of voters still supporting solar projects in their community. We understand that specific situations may be more difficult for SEIA members, and that these kinds of attacks can gin up loud opposition at the local level, but these data suggest that while these attacks generate some pause with voters, a broad, if silent, majority remains with us in their wake.

Key Findings

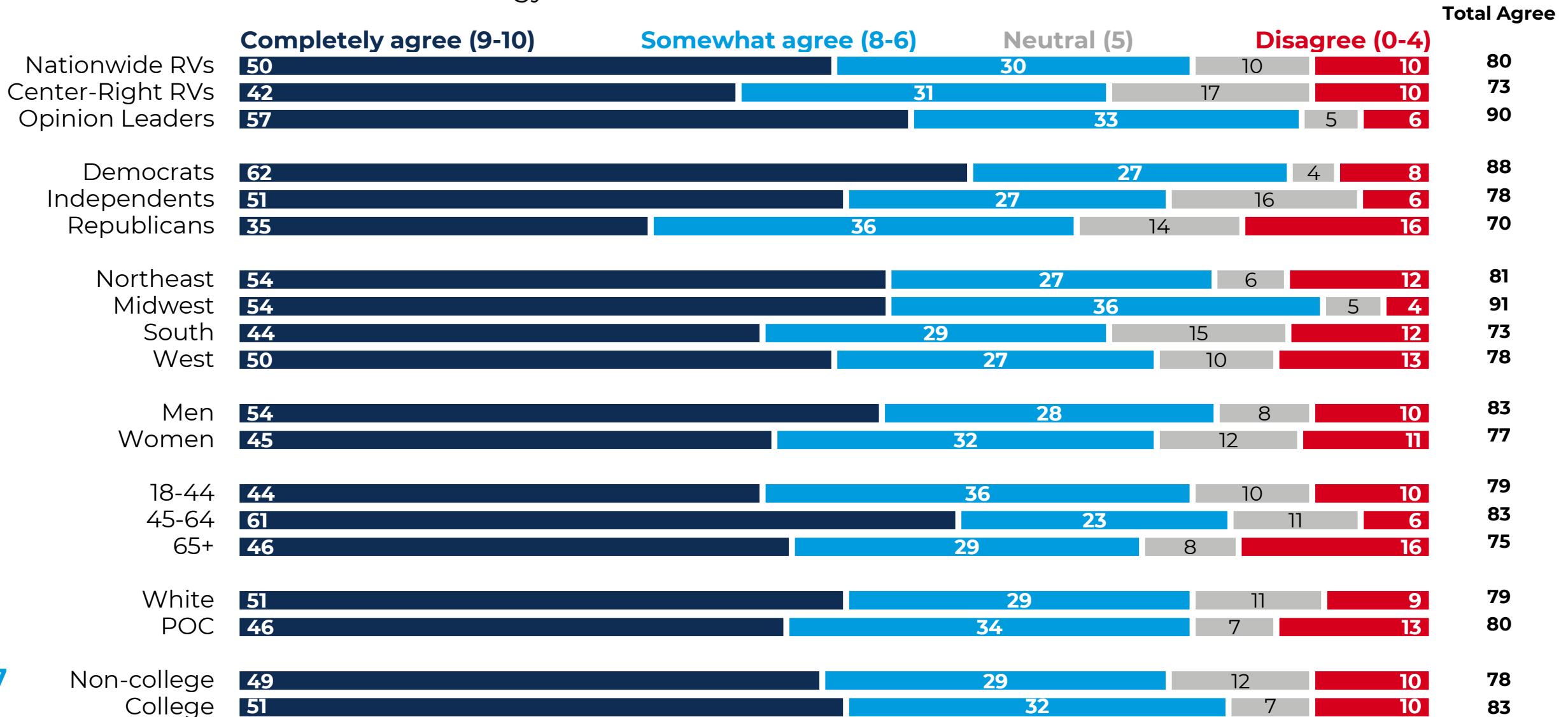
- **Voters support policies to increase U.S production of solar equipment and oppose tariffs that would slow the expansion of solar in the abstract – but a plurality support the specific tariffs as tested.** Over 70% of voters say that policymakers should NOT impose tariffs that would slow the expansion of solar power in America. However, when we describe the Department of Commerce tariffs, a plurality supports them (though many are undecided). After messaging from both sides, net support for the tariffs increases slightly.



Attitudes Towards Solar

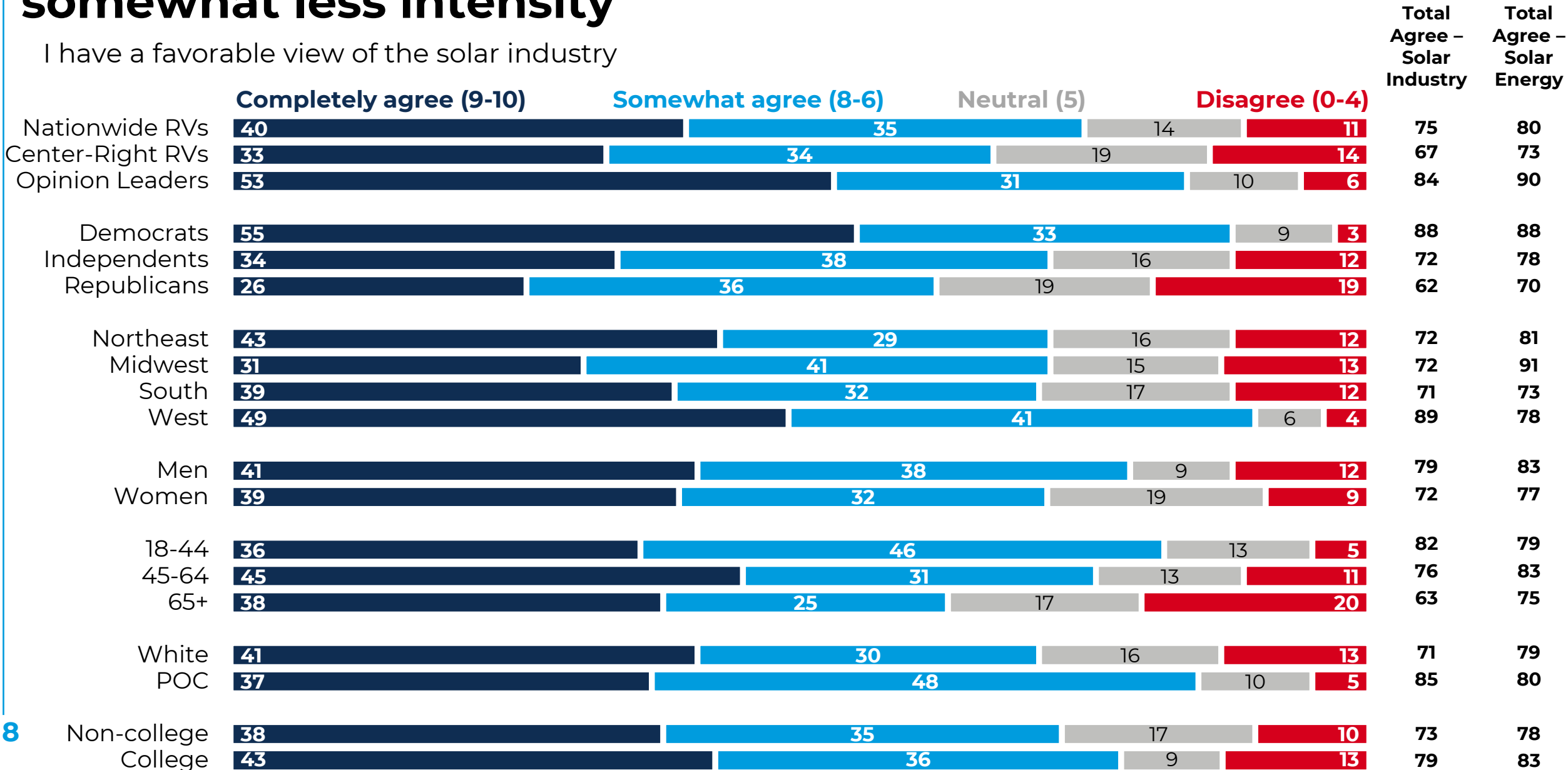
Across partisan lines, voters view solar energy favorably – though less intensity with Republicans

I have a favorable view of solar energy



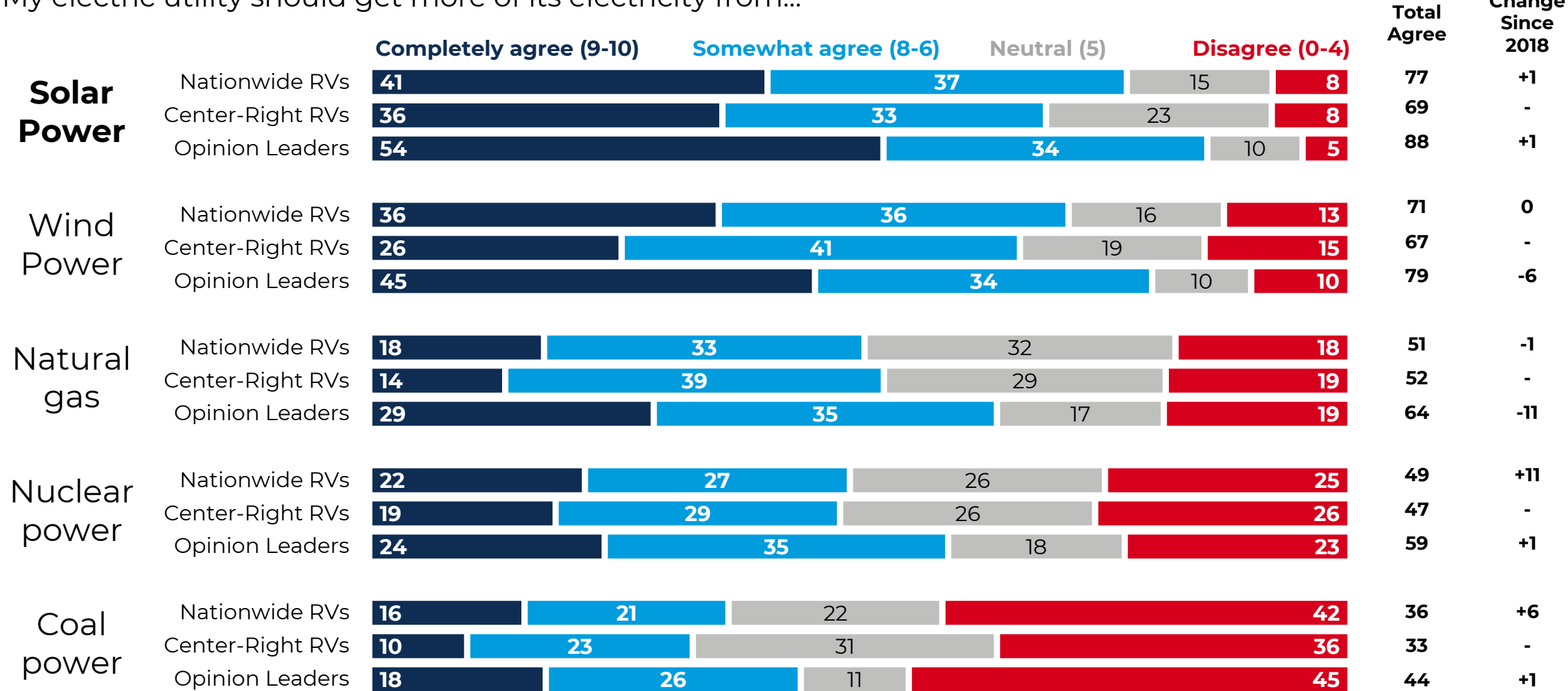
Voters also view the solar industry favorably, though with somewhat less intensity

I have a favorable view of the solar industry

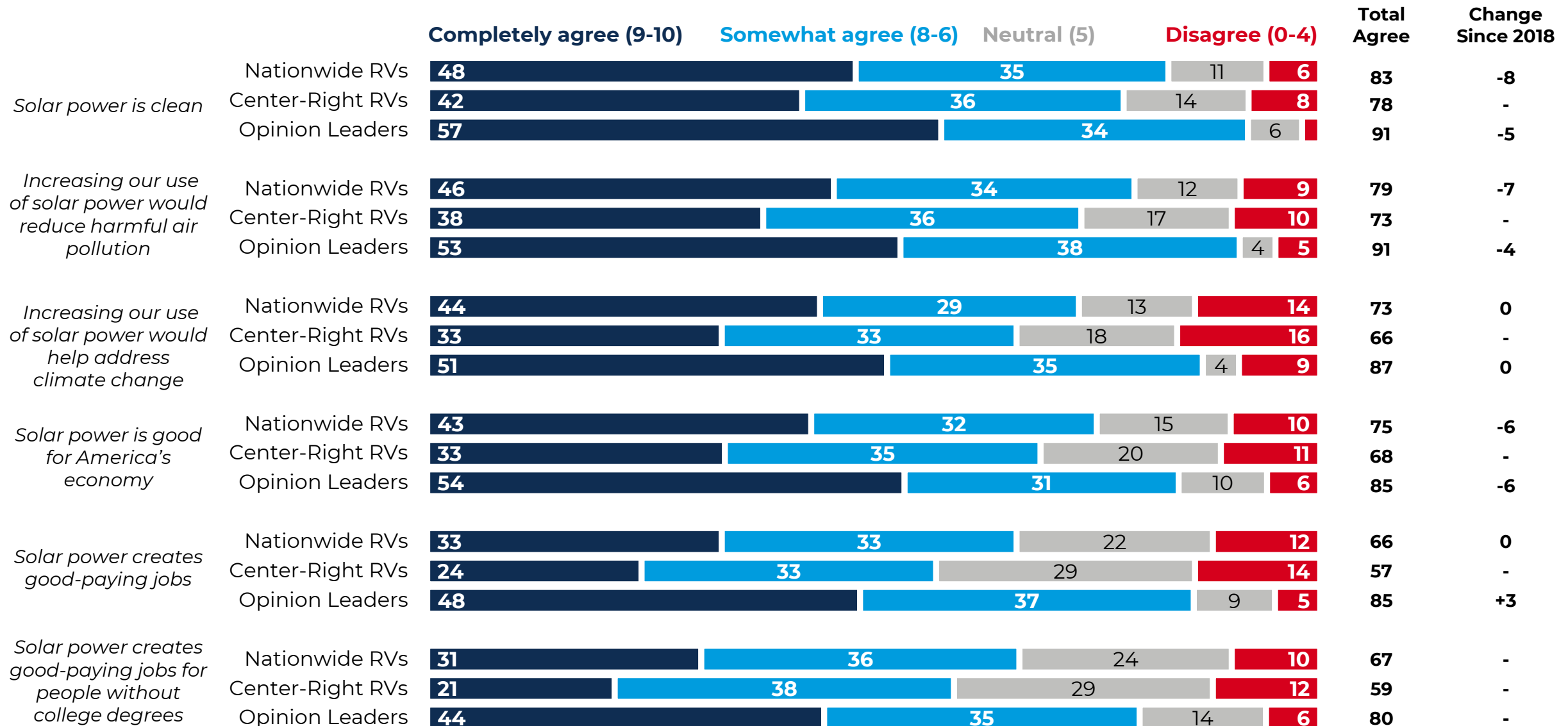


Overwhelming majorities continue to want utilities to prioritize solar power

My electric utility should get more of its electricity from...

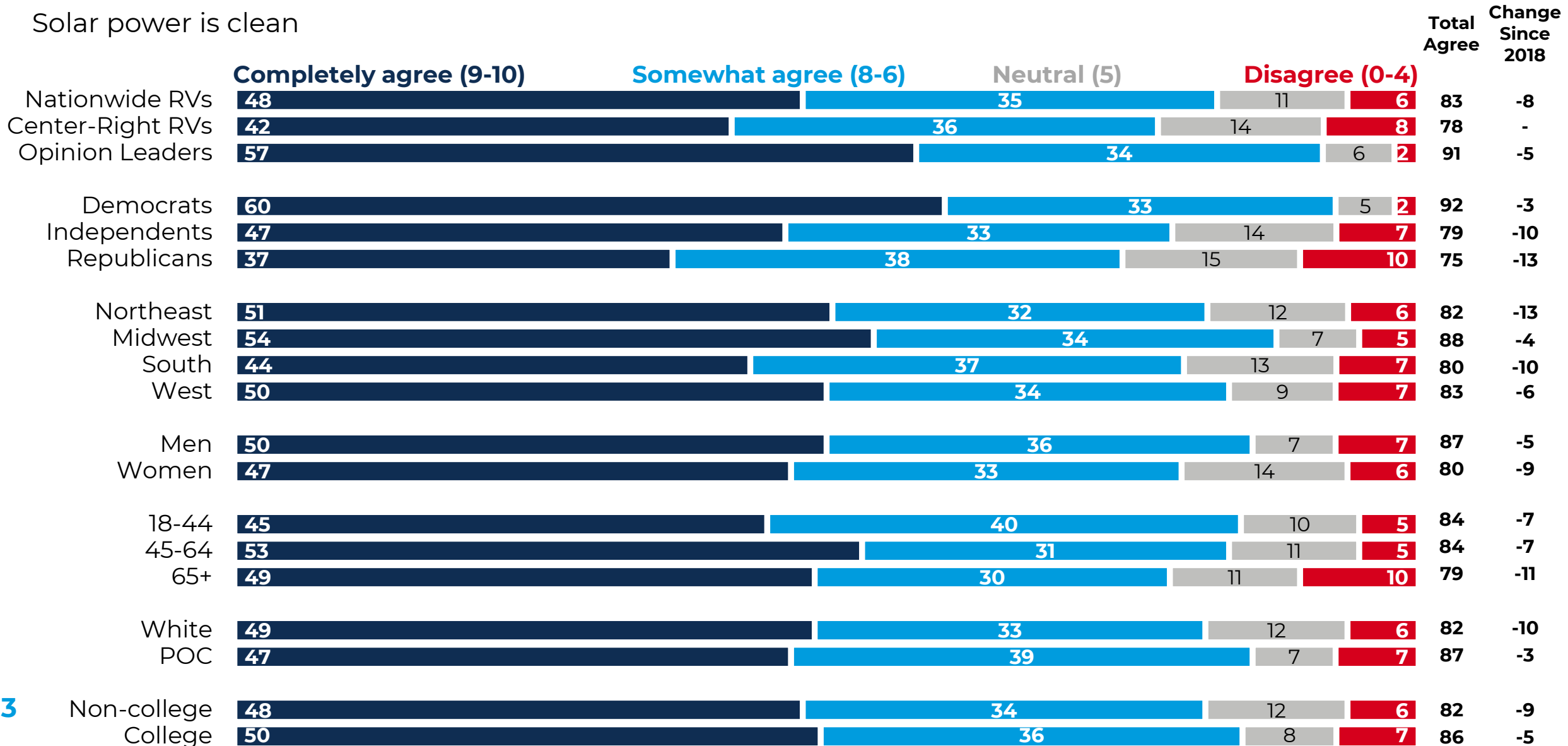


Voters overwhelmingly believe solar is clean and that increased use will reduce pollution – but declines from 2018

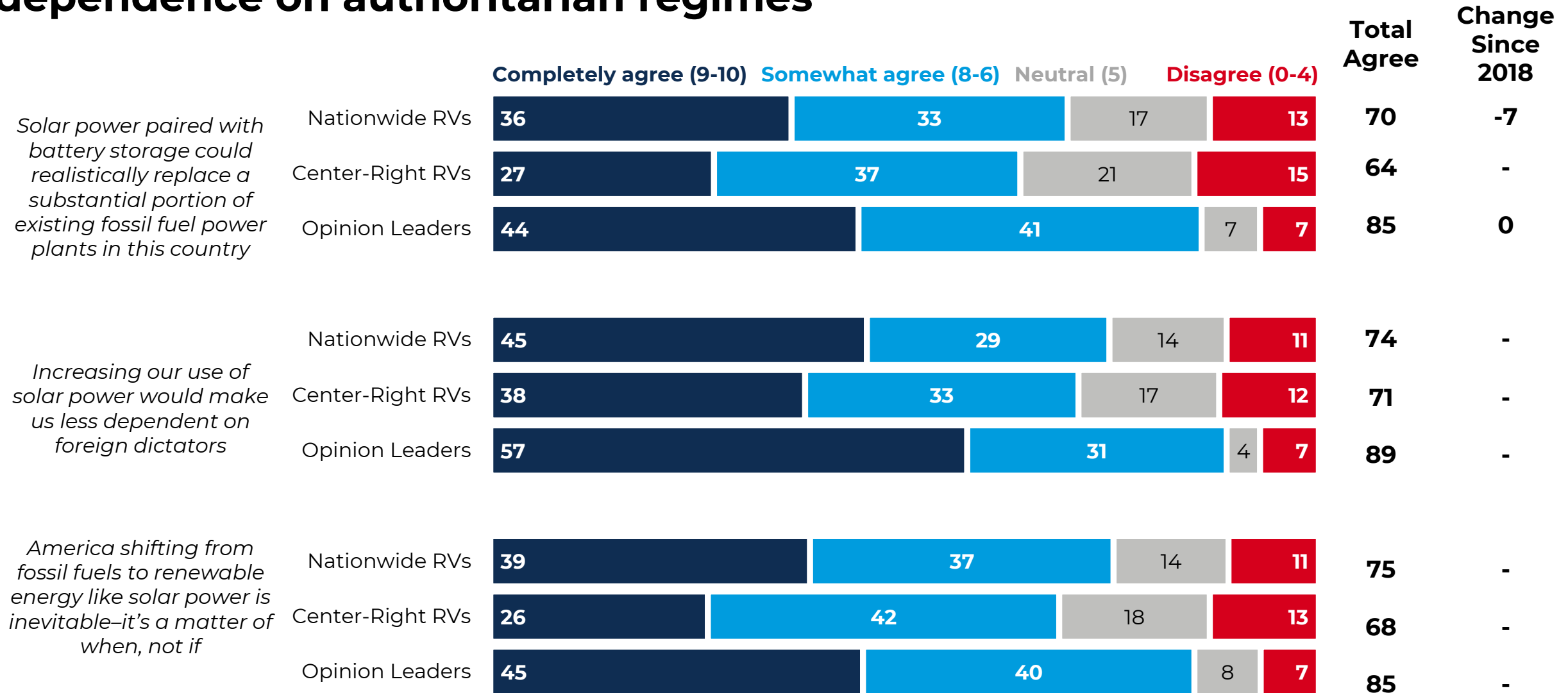


Fewer Republicans and older voters believe solar power is clean than in 2018 – but still broad agreement overall

Solar power is clean

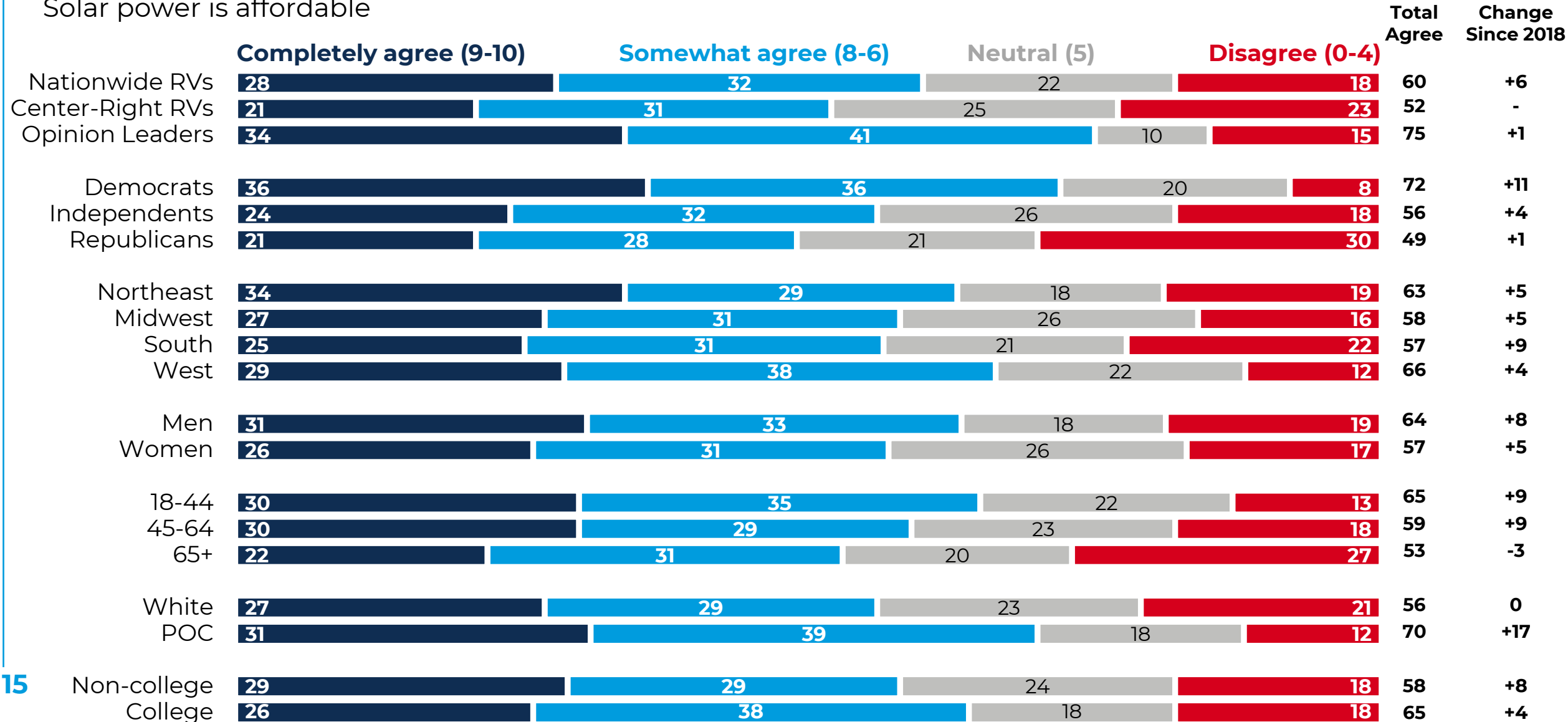


Voters agree that a shift to renewables like solar is inevitable and realistic, though some decline in the latter. Also agree would lessen dependence on authoritarian regimes

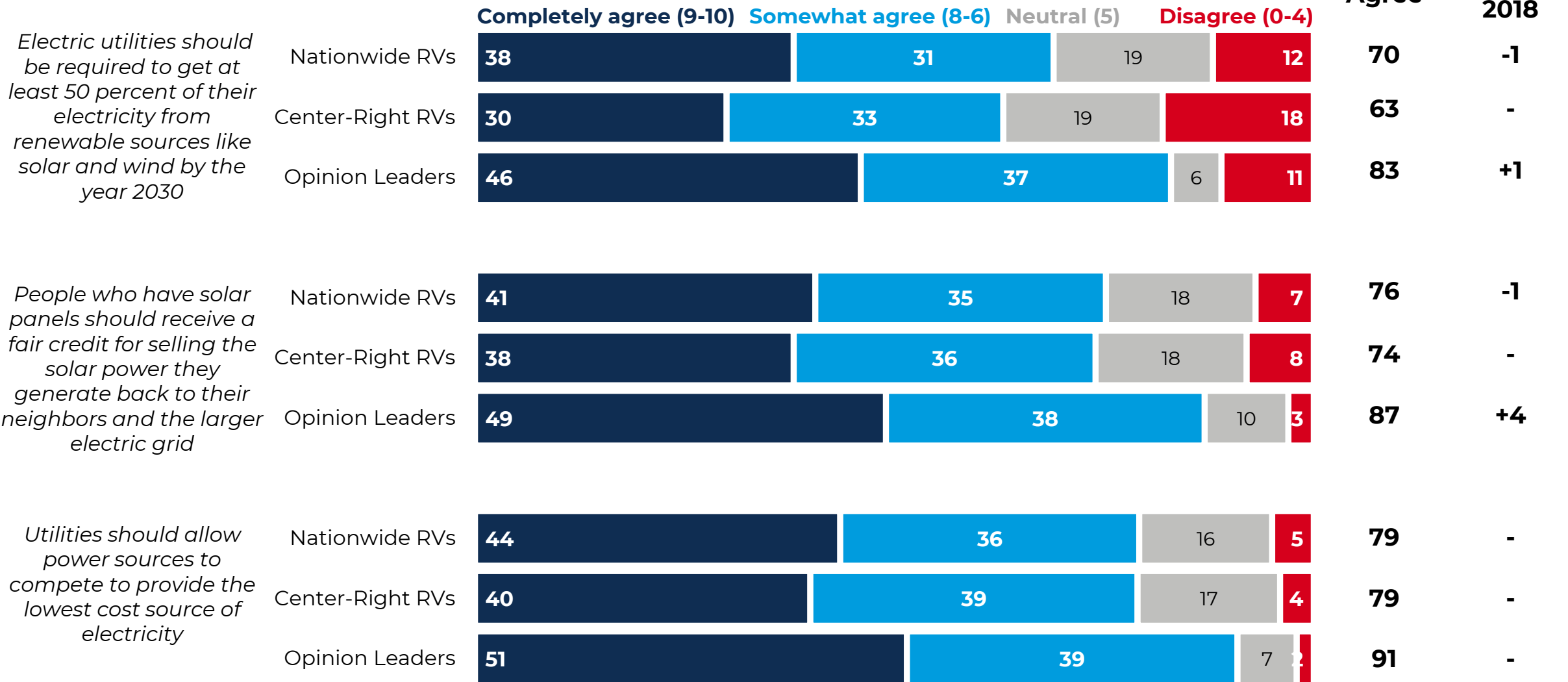


A growing majority see solar as affordable, with gains driven by Democrats and, especially, voters of color

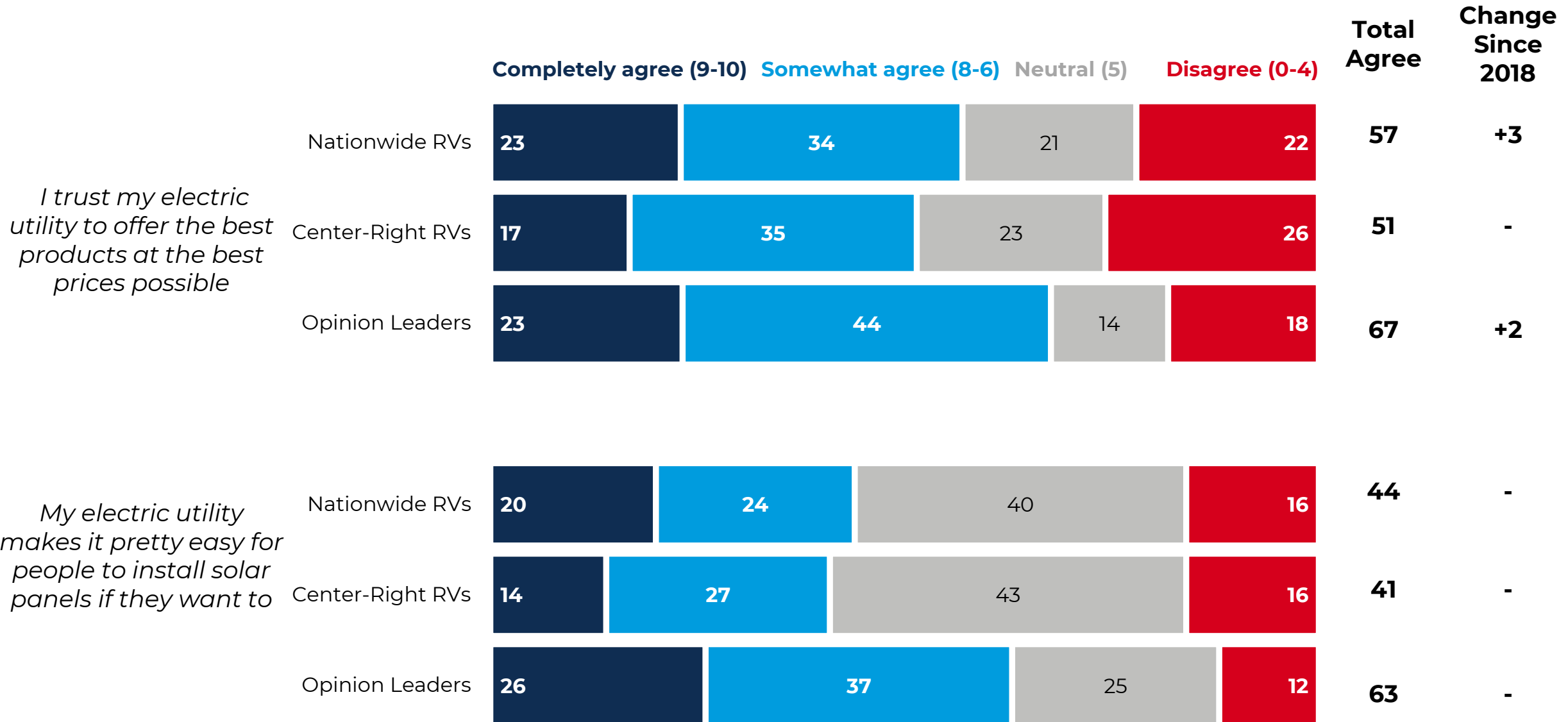
Solar power is affordable



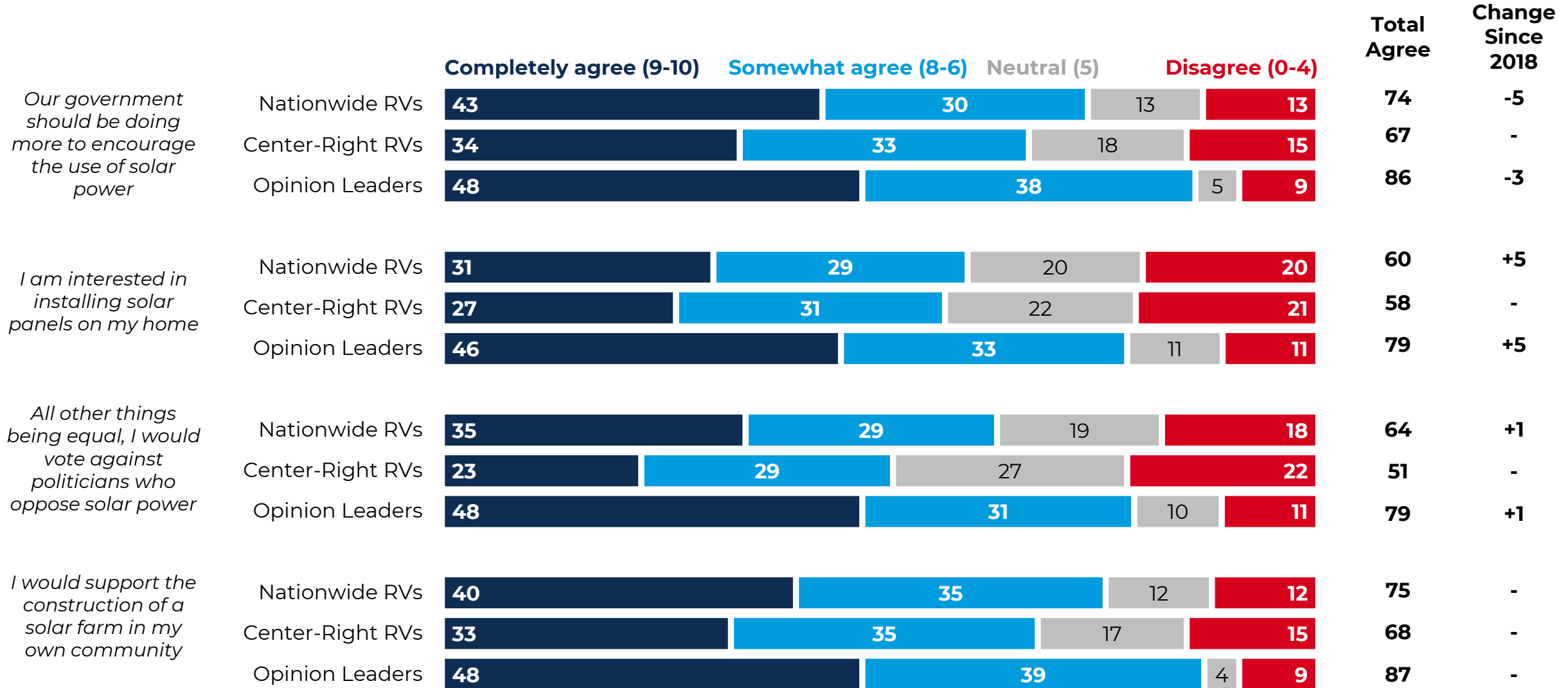
Voters continue to support greater competition, net metering, and the 50% by 2030 goal



Trust in utilities is relatively weak

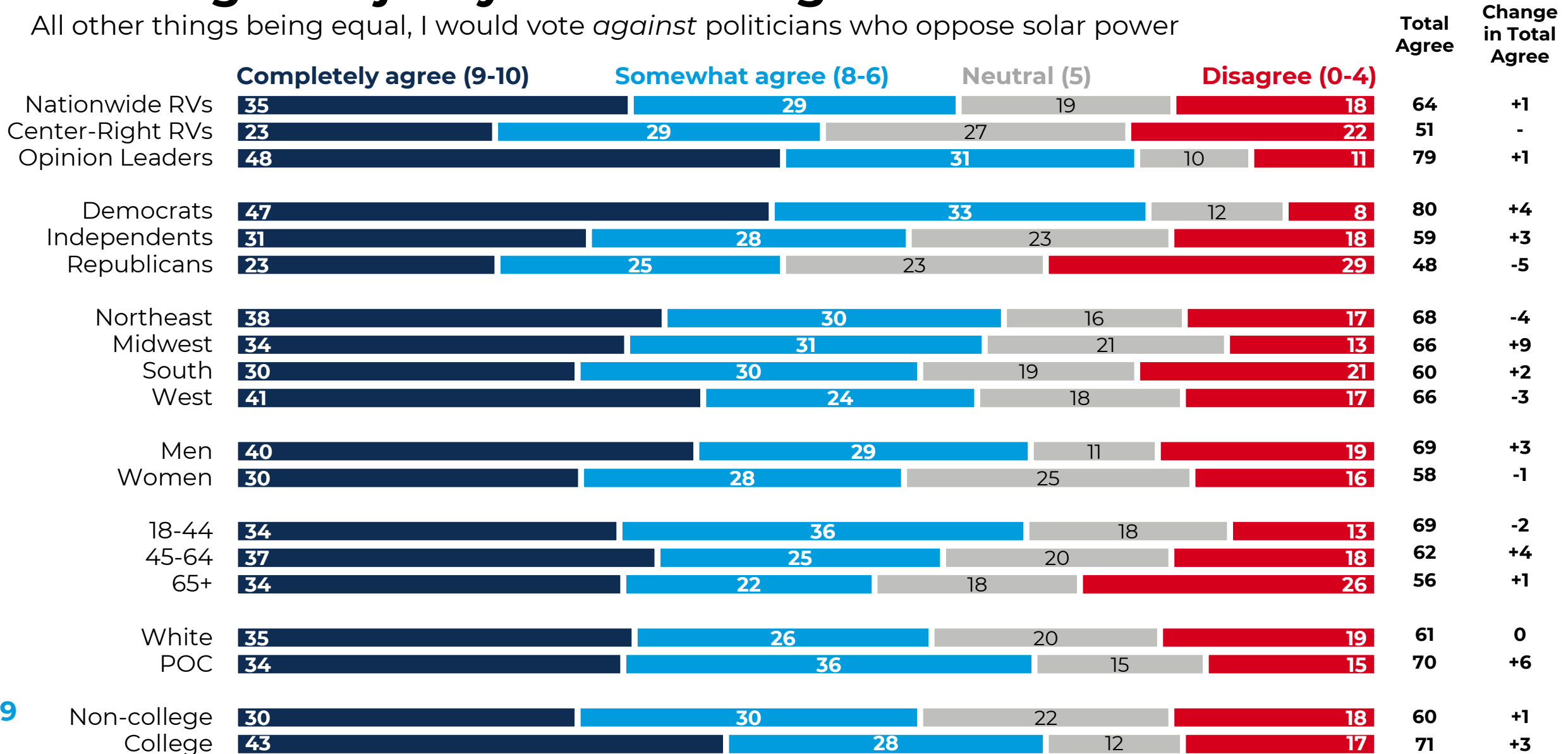


Voters agree government should play a more active role in encouraging solar adoption, support local solar construction



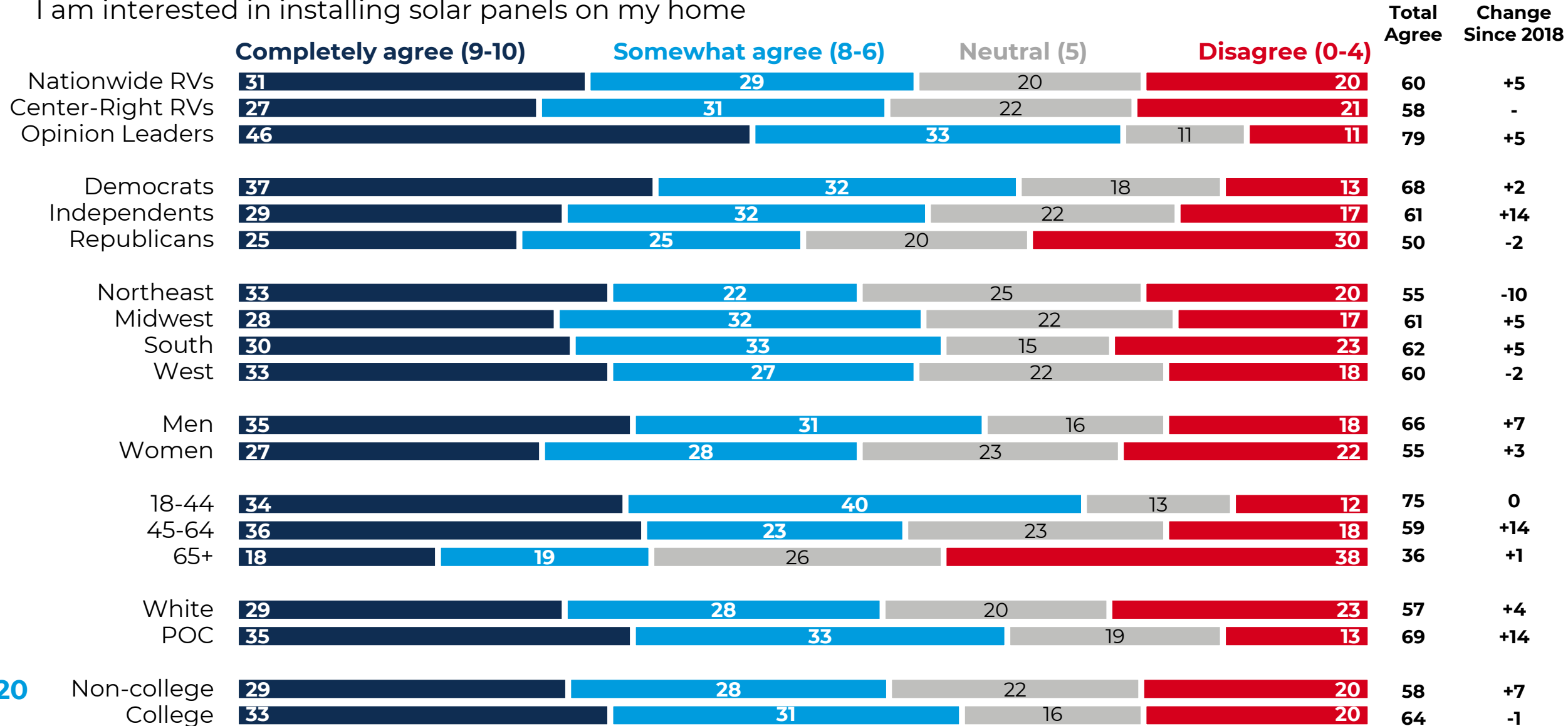
Many claim they would vote against anti-solar politicians, including a majority of center-right voters

All other things being equal, I would vote *against* politicians who oppose solar power



Opinion leaders, younger voters, voters of color, and Democrats show greatest interest in installing solar panels

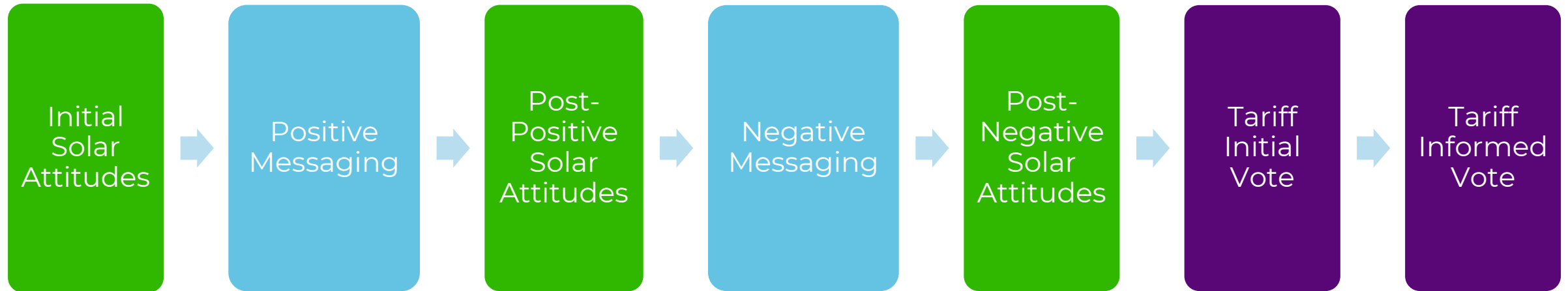
I am interested in installing solar panels on my home





Movement & Targeting

Survey Structure



Positive messaging drives increased agreement on key metrics – particularly economic ones

	Total agree			Completely Agree		
	Initial	Post-positive	Shift	Initial	Post-positive	Shift
<i>Solar power is good for America's economy</i>	75	81	+6	43	48	+5
<i>Solar power is affordable</i>	60	70	+10	28	34	+6
<i>Solar power creates good-paying jobs</i>	66	77	+11	33	44	+11
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<i>Increasing our use of solar power would make us less dependent on foreign dictators</i>	74	79	+5	45	49	+3
<i>I would support the construction of a solar farm near my own community</i>	75	76	+1	40	46	+6
<hr/>						
<i>My electric utility should get more of its electricity from solar power</i>	77	77	0	41	49	+8
<i>Our government should be doing more to encourage the use of solar power</i>	74	78	+4	43	47	+4
<i>Congress should pass legislation to encourage more manufacturing of solar equipment here in America</i>	74	75	+1	42	46	+4
<i>I am interested in installing solar panels on my home</i>	60	66	+6	31	38	+7

Biggest gains on government support are with center-right, white women, and white non-college

	Total agree			Completely Agree		
	Initial	Post-pos	Shift	Initial	Post-pos	Shift
<i>Our government should be doing more to encourage the use of solar power – ALL RVs</i>	74	78	+4	43	47	+4
<i>Center-Right</i>	67	69	+2	34	40	+6
<i>Opinion Elites</i>	86	88	+2	48	51	+3
Among RVs:						
<i>Democrats</i>	88	90	+2	57	58	+1
<i>Independent</i>	73	76	+3	43	49	+6
<i>Republicans</i>	59	66	+7	29	32	+3
<i>People of Color</i>	78	83	+5	42	45	+3
<i>White Men</i>	74	77	+3	47	46	-1
<i>White Women</i>	71	75	+6	41	49	+8
<i>White Non-College</i>	71	76	+5	41	46	+5
<i>White College</i>	73	76	+3	49	50	+1
<i>Age 18-44</i>	76	80	+4	39	43	+4
<i>Age 45-64</i>	77	80	+3	50	53	+3
<i>Age 65+</i>	67	71	+4	41	44	+3

Negative messaging does cause a decline on some metrics, but 70% continue to support solar farms in their community

	Total agree				Completely Agree			
	Initial	Post-positive	Post-negative	Shift from Negs	Initial	Post-positive	Post-negative	Shift From Negs
<i>Solar power is good for America's economy</i>	75	81	-	-	43	48	-	-
<i>Solar power is affordable</i>	60	70	-	-	28	34	-	-
<i>Solar power creates good-paying jobs</i>	66	77	-	-	33	44	-	-
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<i>Increasing our use of solar power would make us less dependent on foreign dictators</i>	74	79	75	-4	45	49	42	-3
<i>I would support the construction of a solar farm near my own community</i>	75	76	71	-5	40	46	39	-1
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<i>My electric utility should get more of its electricity from solar power</i>	77	77	-	-	41	49	-	-
<i>Our government should be doing more to encourage the use of solar power</i>	74	78	73	-5	43	47	40	-7
<i>Congress should pass legislation to encourage more manufacturing of solar equipment here in America</i>	74	75	-	-	42	46	-	-
25 <i>I am interested in installing solar panels on my home</i>	60	66	61	-5	31	38	34	-4

People of color, younger women, those in the Midwest, and lower income are more likely to be swing on government support for solar



Base

Always agrees that government should be doing more to encourage the use of solar power, 9-10

Democrats (40% are base)

- Democratic Men (46%)
- Liberal Democrats (42%)
- Biden 2020 Voters (42%)

Northeasterners (35% are base)

Men (33% are base)

- Men over 55 (34%)
- White Men (35%)
- College Educated Men (36%)

Swing

Not always 9-10 or 0-5

People of Color (62% are swing)

Women (55% are swing)

- Women 18-54 (61%)
- Democratic women (58%)
- Independent women (55%)

Age 18-44 (58% are swing)

Midwest (58% are swing)

Renters (57% are swing)

Income <\$50k (56% are swing)

Oppo

Always neutral or disagree that government should be doing more to encourage the use of solar power, 0-5

Republicans (31% are oppo)

- Republican Women (33%)
- Conservatives (32%)
- Trump voters (32%)

Voters over 65 (25% are oppo)

Income \$150k+ (28% are oppo)

- Sub-demo

Middle-income voters as well as Democratic and college educated women are the best targets for messaging to boost interest in installation

Installer Targets:

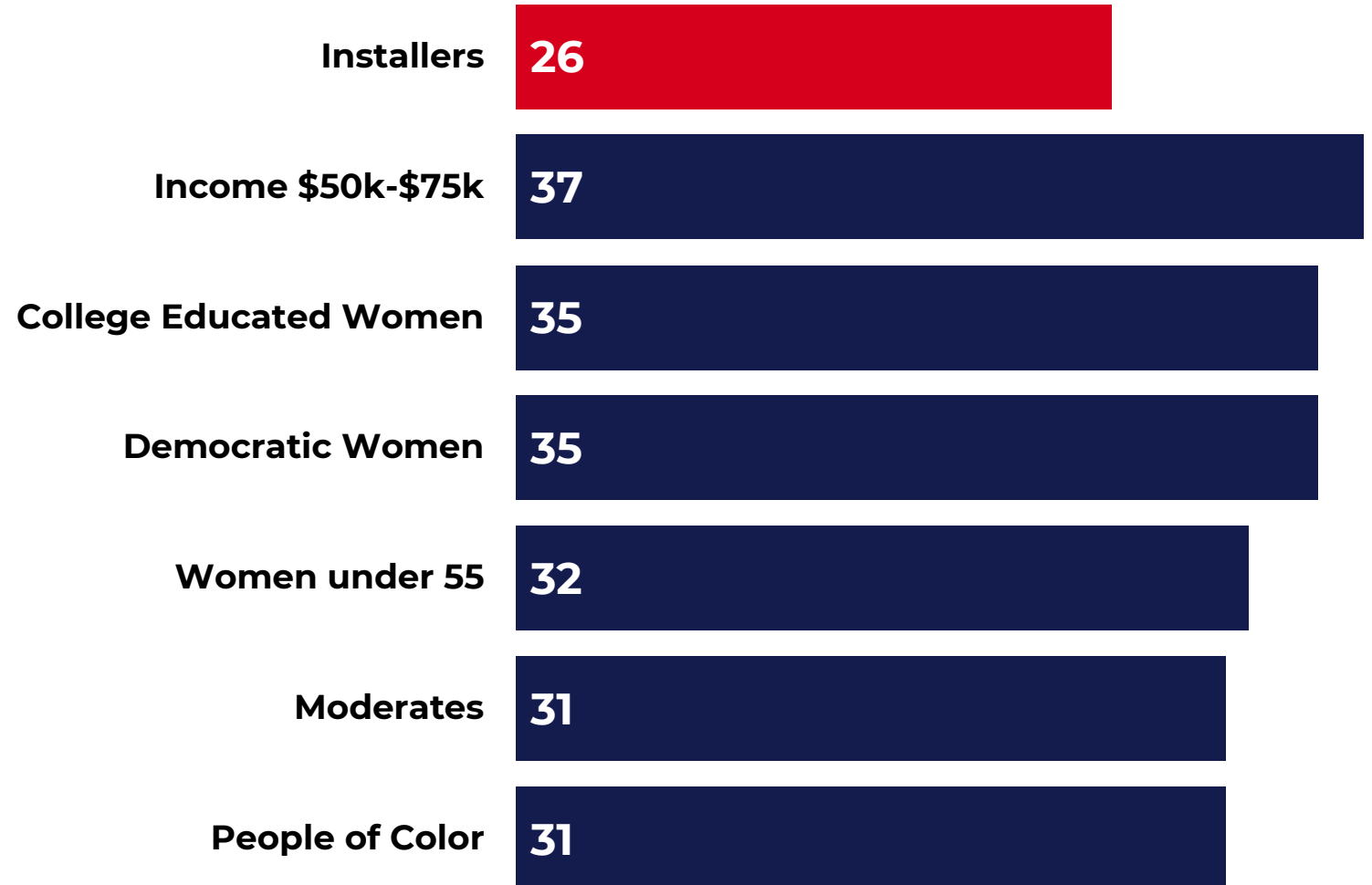
Post-message "I am interested in installing solar panels on my home" 8-10

AND

Increase in interest in installing solar panels after reading pro-solar messaging

AND

Do not own solar panels on home





Messaging about Solar

Full text of positive messages

[HEALTH] By using more clean energy like solar we will sharply reduce the sulfur, arsenic, and mercury pollution that comes from burning dirty and outdated energy sources like oil and coal. Doctors and scientists say that moving to clean energy could save 50,000 American lives every year and dramatically reduce the rates of heart disease, asthma attacks, respiratory diseases, and even cancer.

[HEALTH-NO DIRTY SOURCES] By using more clean energy like solar we will sharply reduce sulfur, arsenic, and mercury pollution. Doctors and scientists say that moving to clean energy could save 50,000 American lives every year and dramatically reduce the rates of heart disease, asthma attacks, respiratory diseases, and even cancer.

[COST] The price of solar power dropped by 70% in the past decade, it is now cheaper than coal and natural gas power in most of the country, and it continues to decline. In fact, researchers say moving to renewable energy like solar will end up saving the average family hundreds of dollars a year in electricity and health care costs.

[ECONOMY-ALL AMERICANS] The solar industry already employs more than 231,000 Americans. These family-supporting jobs pay well over the national average, most don't need a college degree-and there is potential for a million more in the coming years. By using more solar power, we can create quality jobs opportunities for all Americans.

[INDEPENDENCE] For too long, America has been dependent on dangerous, foreign energy. We are at the mercy of big oil companies and the whims of hostile, foreign dictators. The fuel for solar energy is 100% made in America, and it stays in America. The way we break our dependence on foreign oil is clear. It's time to move toward American solar energy so that we don't have to rely on Middle Eastern sheiks or dictators like Vladimir Putin.

[CLIMATE] We have a basic responsibility to leave a better world for our kids, but 99% of scientists, NASA, and the Department of Defense agree that climate change is a threat to their future-and we're already seeing its impact in the form of increasingly strange weather and more severe droughts, wildfires, and storms. Using more clean energy like solar will sharply reduce the carbon pollution that is disrupting our climate.

[ECONOMY-ALL KINDS] The solar industry already employs more than 231,000 Americans. These family-supporting jobs pay well over the national average, most don't need a college degree-and there is potential for a million more in the coming years. By using more solar power, we can create quality jobs for all kinds of people -from engineers to factory workers to installers.

[CONTROL/CHOICE] Instead of depending on utility company monopolies, solar power allows the average consumer to choose how and where they get their energy. That's why over 3 million American homes have chosen to install solar panels, allowing them to produce and store their own energy and giving them control over a critical part of their lives.

[SAFE FOR LAND] Large solar farms are designed to protect the land and wildlife through careful site selection, extensive studies, and collaboration with local communities. They can be sited with native vegetation, habitats, or other environmentally friendly seed mixes that prevent erosion and restore the land after years of heavy use. At the end of a solar farm's expected 35-year life, the equipment is removed, and the land can return to its original use.

Swing voters rank health, cost, and climate messaging at the top. Independence also rises with center-right

<u>% Total Convin.</u>	<u>% Very Convincing</u>				<u>Mean Ranking*</u>				
	RVs	RVs	Solar Action Swing	Center-Right	Opinion Leaders	RVs	Solar Action Swing	Center-Right	
80	42	42	31	42	3.73	3.74	3.98	3.90	HEALTH
74	41	39	35	49	3.86	3.94	3.77	3.44	HEALTH – NO DIRTY SOURCES
76	40	39	28	46	3.62	3.58	3.62	3.70	COST
76	40	35	30	41	4.21	4.24	4.20	4.36	ECONOMY – ALL AMERICANS
75	40	40	33	46	3.95	3.94	3.92	3.71	INDEPENDENCE
74	40	39	32	45	3.93	3.83	3.98	3.98	CLIMATE
76	37	37	27	43	4.14	4.20	4.18	3.79	ECONOMY – ALL KINDS
74	37	34	29	42	4.15	4.18	3.97	4.33	CONTROL/CHOICE
76	36	34	31	40	4.38	4.41	4.44	4.54	SAFE FOR LAND

*Responses ranked 1-7, where 1 was “most convincing” and 7 was “least convincing” as reasons to support policies that encourage solar power

Unlike 2018, climate message now popping with independents. But still not Republicans

	<u>% Very Convincing</u>			<u>Mean Ranking*</u>				
RVs	Dem	Ind	Rep	RVs	Dem	Ind	Rep	
42	55	35	29	3.73	3.61	3.83	3.80	HEALTH
41	46	44	33	3.86	3.92	3.70	3.88	HEALTH – NO DIRTY SOURCES
40	53	35	28	3.62	3.65	3.90	3.43	COST
40	53	37	28	4.21	4.30	4.24	4.09	ECONOMY – ALL AMERICANS
40	49	38	32	3.95	3.95	3.87	3.99	INDEPENDENCE
40	52	42	24	3.93	3.66	3.73	4.36	CLIMATE
37	49	30	28	4.14	4.13	4.26	4.09	ECONOMY – ALL KINDS
37	46	37	27	4.15	4.36	3.92	4.06	CONTROL/CHOICE
36	44	36	26	4.38	4.41	4.58	4.23	SAFE FOR LAND

*Responses ranked 1-7, where 1 was “most convincing” and 7 was “least convincing” as reasons to support policies that encourage solar power

Opposition messages generate concern with over 60% of voters, but not huge intensity.

RVs <i>% tot conv.</i>	RVS <i>% tot unconv.</i>	RVs	Solar Action Swing <i>% very convincing</i>	Center Right	Opinion Leaders
66	18	30	23	29	30
65	17	27	20	28	30
62	20	26	18	24	28
63	22	26	23	27	31
60	25	25	19	25	26

[TOXIC TRASH] Solar panels may sound clean, but they are complex pieces of technology that become big, toxic, pieces of waste at the end of their lives. By 2050, up to 78 million metric tons of solar panels will have reached the end of their lives. And because these panels contain toxic materials like lead and cadmium that can leach out as they break down, putting them in landfills means new environmental hazards and pollution across America.

[MINERALS] Although solar power may produce clean energy, the process of building the panels is anything but. In order to build solar panels, pounds of minerals and raw material have to be extracted from the earth –a dirty and pollution-creating process. In fact, compared with a natural gas power plant, solar power requires at least 10 times as many total tons of raw materials mined, moved, and converted into machines to deliver the same quantity of energy.

[FORCED LABOR] Extracting the materials necessary for solar panel production is far too often linked with human rights abuses and forced labor in the developing world. In fact, many of the companies mining the minerals essential for solar panels have faced allegations of abuse. And China, the leading exporter of solar components, has been able to gain global dominance in the market through the use of forced labor among the country’s Uyghur Muslim minority.

[INSUFFICIENT/UNRELIABLE] When the sun doesn’t shine, solar power doesn’t work – it’s as simple as that. While solar may be a solution for the sunny and warm parts of the country, it’s not a viable option for most of the Northeast or Northwest, or anywhere that doesn’t have large amounts of land available to cover in enormous panels. And relying on unreliable solar panels will leave us at risk of regular blackouts or the loss of power and heat in cold winter months.

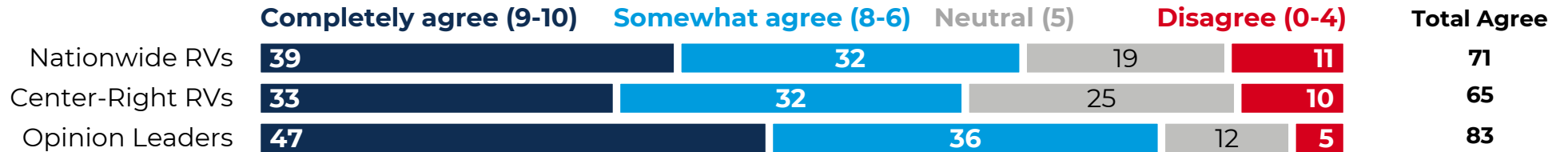
[LAND USE] Building solar power on the scale needed to have a positive environmental impact would take up millions of square miles of land –land that could have other uses, is currently beautiful, pristine American farmland, or southwestern deserts that are home to millions of plant and animal species. Large scale solar farms are an eyesore that take up too much space to collect too little energy.



Tariff Views

Voters support domestic production of solar equipment and oppose the idea of tariffs that would slow solar expansion

Policy makers should NOT impose tariffs that would slow the expansion of solar power in America



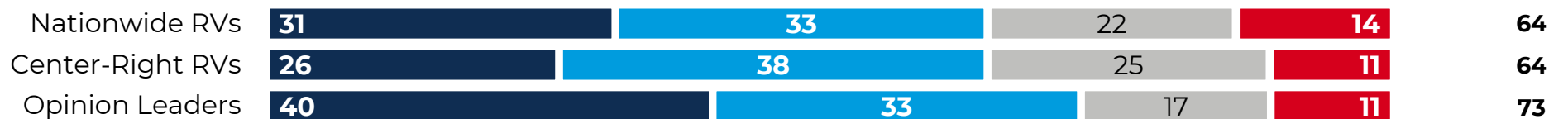
Congress should pass legislation to encourage more manufacturing of solar equipment here in America



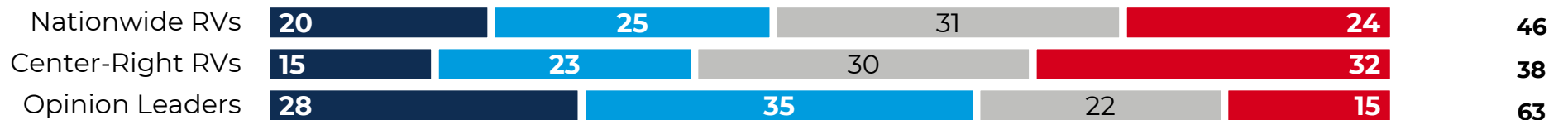
It is important that we develop a robust domestic solar manufacturing industry in America



I would be more likely to install solar panels on my home if they were made in America

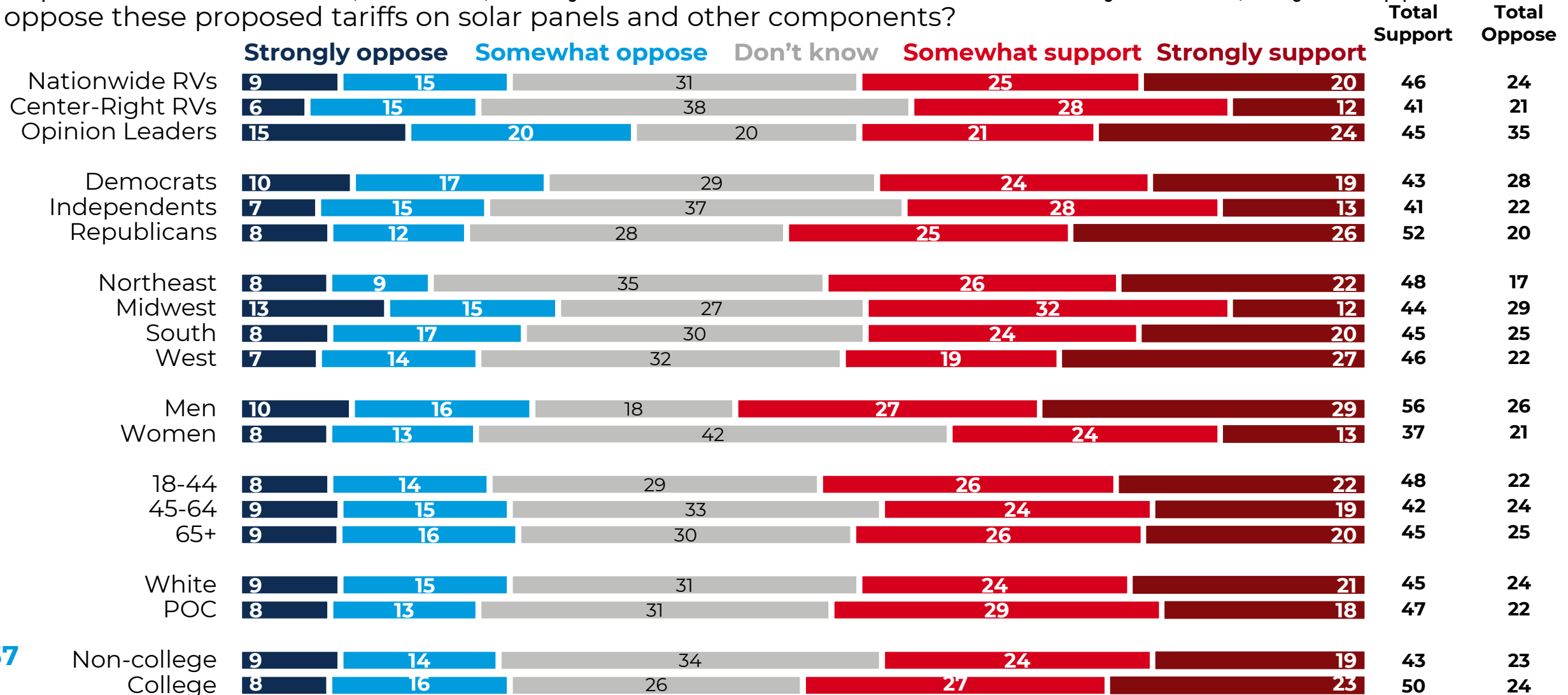


I would be more likely to install solar panels on my home if they were made with union labor



However, as described, voters (especially men) lean toward supporting Dept of Commerce tariffs – though significant uncertainty

As you may know, the U.S. Department of Commerce is considering tariffs on solar panels and other components imported from Cambodia, Thailand, Malaysia and Vietnam. Just based on what you know, do you support or oppose these proposed tariffs on solar panels and other components?



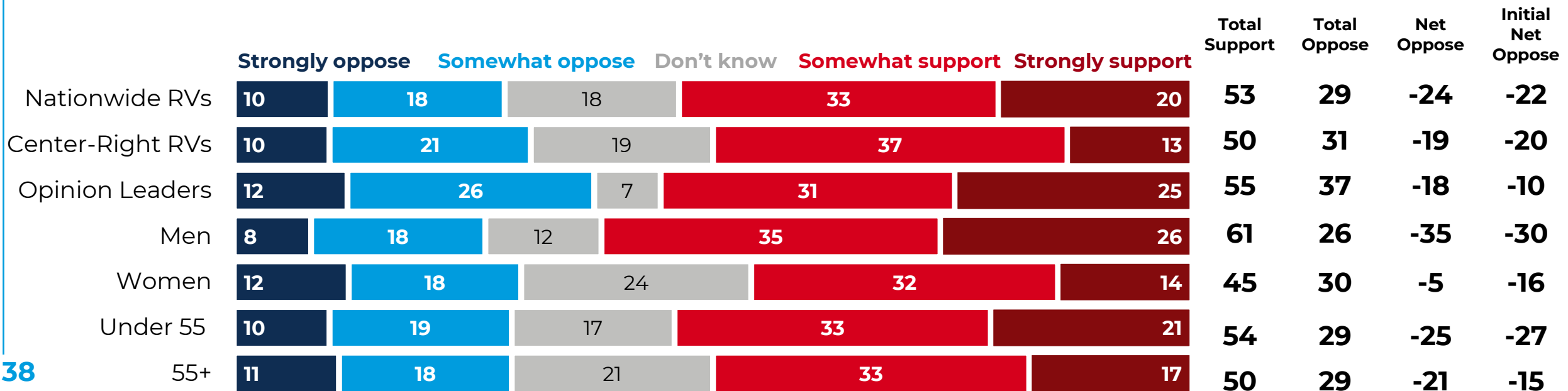
After messaging from both sides, net support for tariffs increases slightly

Opponents of these tariffs say...

...that we must add American manufacturing, but these tariffs aren't the right way to do that. These tariffs will raise prices on consumers, who are already dealing with inflation. Moreover, they could choke off the supply of panels and components to American solar installers and could put a hold on billions of dollars of investment in clean energy at a time when climate change demands immediate action. That would harm a growing industry that has the potential to create a million good American jobs. Instead of this short-sighted approach, we should invest in the American solar manufacturing industry so that we are building these components here in America.

Supporters of these tariffs say...

...that they are the only way to keep American solar manufacturers competitive and stop China's use of forced labor that gives them an unfair advantage over American companies. China has used forced labor to gain dominance of the global market and flood the U.S. market with solar components at prices that American manufacturers can't compete with, while evading existing tariffs on Chinese equipment by routing them through these countries –putting many American companies at risk of folding. We need these tariffs to level the playing field for American companies and uphold our values in the face of hostile foreign powers like China.



Tariff targets: Voters lean toward supporting tariffs, but the most efficient targets for persuasion are center-left women



Base

Always opposes proposed new tariffs on solar panels and other components

Men (18% are base)

- Men over 55 (19%)
- College-Educated Men (19%)

Midwesterners (20% are base)

Liberals (20% are base)

Swing

Not Base or Oppo

Women (58% are swing)

- Non-College Educated Women (62%)
- Independent women (62%)
- Democratic women (59%)

Independents (56% are swing)

Age 45-64 (53% are swing)

People of Color (49% are swing)

Oppo

Always supports proposed new tariffs on solar

Men under 55 (51% are oppo)

Hispanic voters (46% are oppo)

Republicans (45% are oppo)

- Republican Men (55%)



Conclusions and Recommendations

Messaging Recommendations

- 1. We should lead with economic messaging – on both costs and jobs – especially with center-right voters.** While we have other important and effective messages, the most important ones to be delivering right now are on cost and jobs. These are the two places where skepticism is holding back higher (and more intense) support for solar, particularly given that Americans are especially cost-conscious right now. And while the jobs messaging doesn't score terribly high (though cost does), these are the two areas where we see the most gains in the survey and jobs clearly comes through in the post-messaging open-end.
- 2. Messaging around cleaner air, less pollution, and health benefits remains strong across the political spectrum.** Voters across demographics already agree that solar power is clean and that increasing our use of solar power would reduce harmful air pollution and our health messaging scored at or near the top of the list with every key group and across the political spectrum. Both messages tested worked well and there is no need to explicitly push off of “dirty sources” if SEIA would prefer not to (in fact, that may weaken our message with center-right and opinion leaders).
- 3. Climate messaging should no longer be reserved only for Democrats – though it still doesn't pop with the far-right.** Climate now clearly comes through as top-tier message with swing voters. Unlike 2018, this message isn't reserved for center-left voters as it scores as a top-tier message with center-right voters as well. However, it is still much lower with those on the far right of the political spectrum. Climate remains even a more important message with opinion leaders than it is overall.
- 4. Independence is also a good message for us, particularly with center-right voters.** Our independence message scores solidly. More important, it clearly comes through with in the post-messaging open-end – especially with center-right voters, where it dominates.

Targeting Recommendations

- 1. Target younger, center-left, and college-educated men for immediate political activation.** Similar to 2018, these are the groups who show the most intensity for voting against an anti-solar politician before they hear any messaging, and we believe they would also be the most receptive to encouragement to take other political actions such as contacting their representative.
- 2. Target center-right voters, younger and non-college women, and people of color to boost overall and intensity of support for government action to boost support.** These are the groups where we gain the most ground and/or who are most likely to be swing on pro-solar government action.
- 3. Target younger and Democratic men (both white and men of color) and men with higher incomes for immediate installation.** These are the groups who show the most intense interest for installing solar panels on their own home before they hear any messaging.
- 4. Target younger, college-educated, and Democratic women and people of color to boost interest in installing solar panels.** These are the groups who disproportionately move towards having strong interest in installing solar panels after messaging.

Recommended Language in Support of Solar

[COSTS] The price of solar power dropped by 70% in the past decade, it is now cheaper than coal and natural gas power in most of the country, and it continues to decline. In fact, researchers say moving to renewable energy like solar will end up saving the average family hundreds of dollars a year in electricity and health care costs.

[JOBS] The solar industry already employs more than 231,000 Americans. These family-supporting jobs pay well over the national average, most don't need a college degree-and there is potential for a million more in the coming years. By using more solar power, we can create quality jobs for all kinds of people - from engineers to factory workers to installers.

[HEALTH] By using more clean energy like solar we will sharply reduce sulfur, arsenic, and mercury pollution. Doctors and scientists say that moving to clean energy could save 50,000 American lives every year and dramatically reduce the rates of heart disease, asthma attacks, respiratory diseases, and even cancer.

[CLIMATE] We have a basic responsibility to leave a better world for our kids, but 99% of scientists, NASA, and the Department of Defense agree that climate change is a threat to their future—and we're already seeing its impact in the form of increasingly strange weather and more severe droughts, wildfires, and storms. Using more clean energy like solar will sharply reduce the carbon pollution that is disrupting our climate.

[INDEPENDENCE] For too long, America has been dependent on dangerous, foreign energy. We are at the mercy of big oil companies and the whims of hostile, foreign dictators. The fuel for solar energy is 100% made in America, and it stays in America. The way we break our dependence on foreign oil is clear. It's time to move toward American solar energy so that we don't have to rely on Middle Eastern sheiks or dictators like Vladimir Putin.

Thank You

New York

Washington, DC

Hartford

Chicago

Denver

Seattle



Appendix

