8th / February / 2022

January 2022 Poll of Texas Voters on Electric Grid Reliability

State-wide Report





Texas Energy Poll – Jan 2022

Sample Size: Texas n=1029

Margin of error for the total sample is +/- 3.37 %



Field dates of Jan 26 - Feb 3 2022

Texas districts represented:

HD12 (n=44)

HD31 (n=55)

HD45 (n=74)

HD14 (n=53)

SD5 (n=148)

General base sample (n=723)

Methodology



The Texas Energy Survey was conducted by YouGov among a representative sample of 1,029 Texas adult residents. The survey was fielded online between January 26th and February 3rd, 2022.

The sample was weighted according to gender, age, race, and education based on the American Community Survey, conducted by the U.S. Bureau of the Census, as well as 2020 Presidential vote, registration status, geographic region, and news interest. Respondents were selected from YouGov's opt-in panel to be representative of all U.S registered voters. The weights range from 0.11 to 5.29, with a mean of 1 and a standard deviation of 0.46.

The margin of error (a 95% confidence interval) for a sample percentage p based upon the entire sample is approximately 3.4%. It is calculated using the formula

$$\hat{p} \pm 100 \times \sqrt{\frac{1 + CV^2}{n}}$$

where CV is the coefficient of variation of the sample weights and n is the sample size used to compute the proportion. This is a measure of sampling error (the average of all estimates obtained using the same sample selection and weighting procedures repeatedly). The sample estimate should differ from its expected value by less than margin of error in 95 percent of all samples. It does not reflect non-sampling errors, including potential selection bias in panel participation or in response to a particular survey.





The majority of Texans surveyed either lost power, running water, or suffered damage to their homes during Winter Storm Uri.



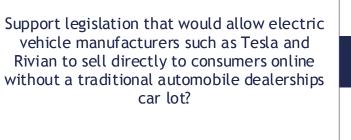
Texans were highly affected by February 2021's Winter Storm Uri. As a result, Texans are concerned about the current state of the energy grid and call on state officials to ensure that the energy grid can withstand similar, future events.

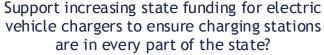


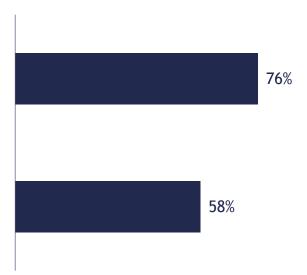
A vast majority of Texans agree that Texas officials should do more to ensure that the energy grid can withstand future hurricanes, winter storms, and intense heat waves.

Most Texans support various legislations for EV, including allowing manufacturers to sell directly to consumers, building more charging stations throughout the state, and helping schools purchase electric buses.

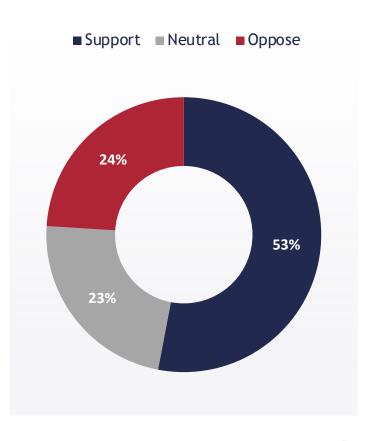






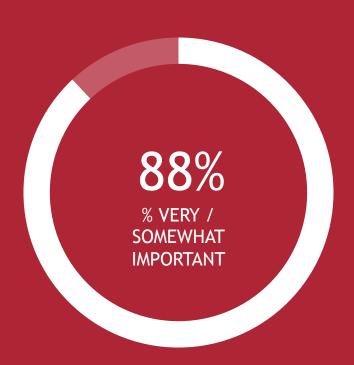


Support/oppose EV bus legislation for schools





Nearly all Texans agree that it is important for the state to develop a plan for EV funding usage before they receive the funds.





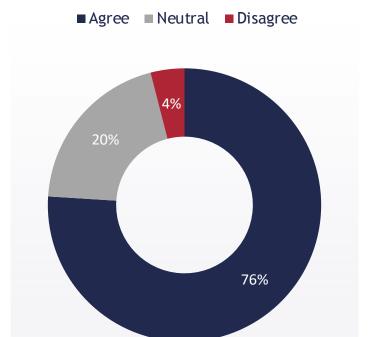
Looking toward the future, Texans agree that plans for EV funding need to be made in advance, and the state should do more to encourage business to adopt more new energy technology. A majority also think that EV drivers should be taxed at the same rate as drivers of gasoline vehicles in the future.



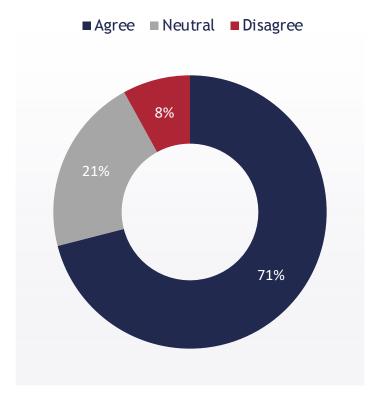
A majority of Texans agree that the state should be doing more to encourage businesses to build different kinds of energy resources.

A majority of TX residents are in favor of incentives for those who provide extra electricity back to the grid in times of need; this positively impacts likelihood to invest in the technology for about half of respondents.

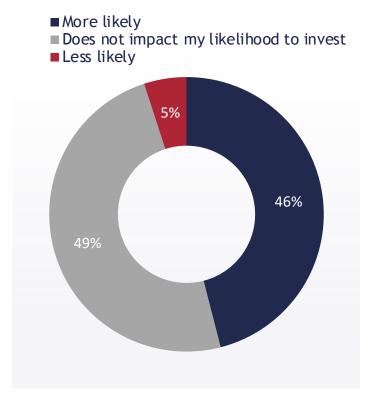
Individuals or groups should be allowed to provide extra electricity back to the energy grid in times of need, and should be paid for the electricity they provide like any other energy source.



Do you agree or disagree that Texas leaders should require compensation for vehicle owners who send power back to the grid in times of need?



Does the ability to sell back extra energy while assisting with grid reliability make you more or less likely to buy solar panels, an electric vehicle, or battery storage technology in the future?





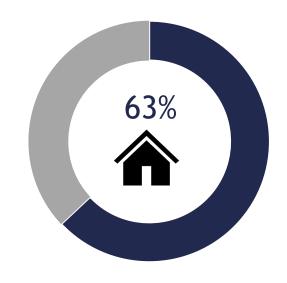
IMPACT OF WINTER STORM URI

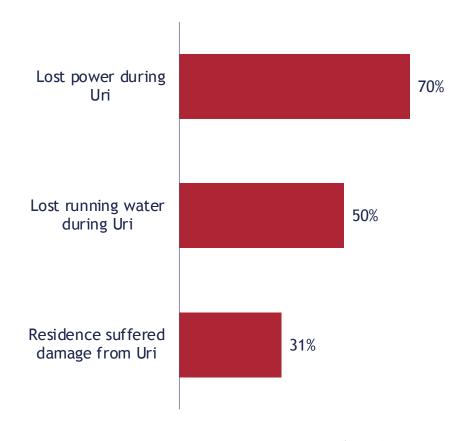


Nearly 2/3 of the TX sample owns their own home; a majority of residents lost power during Winter Storm Uri, while nearly half lost running water.



% of people who own their own home









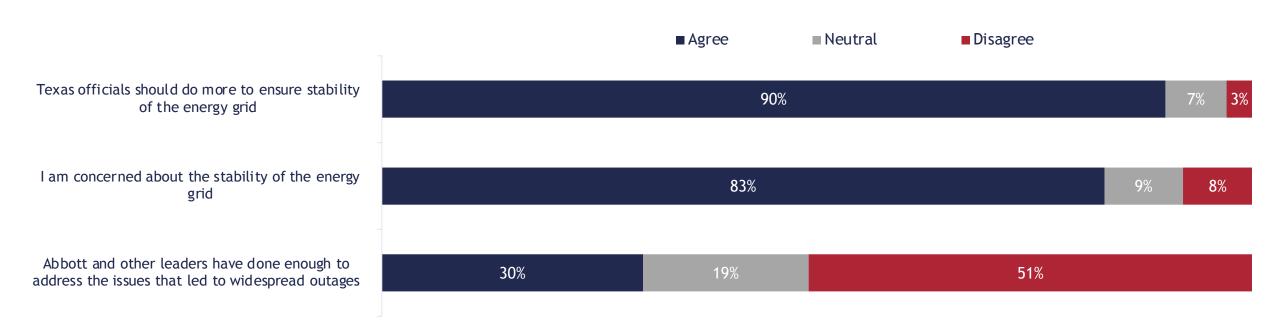
D2: Did you lose running water during Winter Storm Uri? (n=1029)

D3: Did your residence suffer damage as a result of the storm? (n=1029)

D4: Do you currently own or rent your home? (n=1029)





















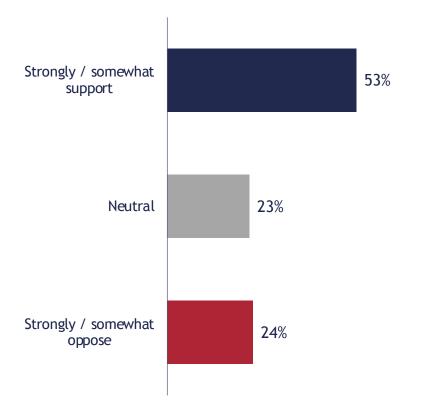
SUPPORT FOR EV TECHNOLOGY



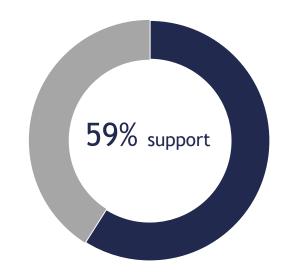








Would you support your local school district making the larger upfront investment in transitioning to electric buses?



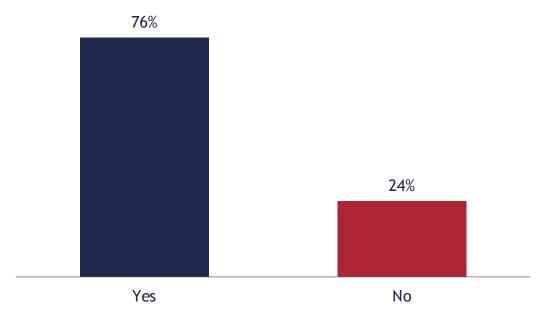


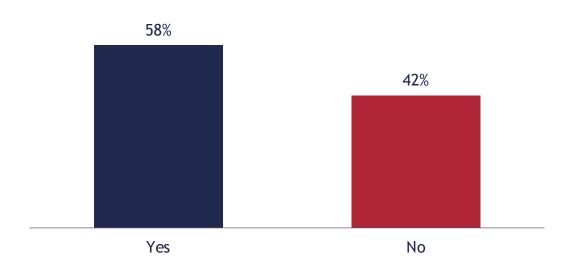


3/4 of TX residents support legislation that would allow people to buy EVs directly from manufacturers online; slightly over half support increasing funding for EV charging stations.



Do you support legislation that would allow electric vehicle manufacturers such as Tesla and Rivian to sell directly to consumers online without a traditional automobile dealerships car lot? Do you support increasing state funding for electric vehicle chargers to ensure charging stations are in every part of the state?







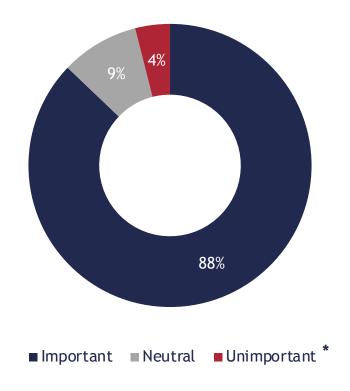


OPINIONS ON EV INFRASTRUCTURE AND ENERGY POLICY

Nearly 9 in 10 TX residents believe it is important that the state develops a plan of action for how it will use EV funds before receiving the funds.



How important is it to you that Texas develop a comprehensive plan of how to use funds for EV before receiving them?



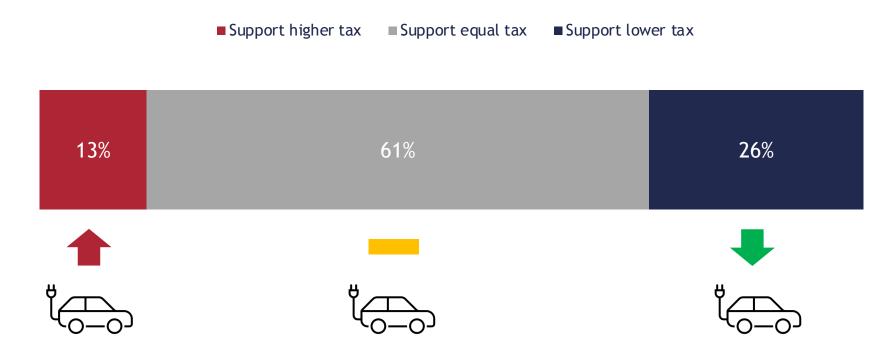




6 in 10 TX respondents think that EV drivers should be taxed at a similar rate as drivers of cars that use gasoline, while about 1/4 think EV drivers should be taxed less.



Should EV drivers be taxed at a higher rate, lower rate, or about the same as drivers of gasoline cars?



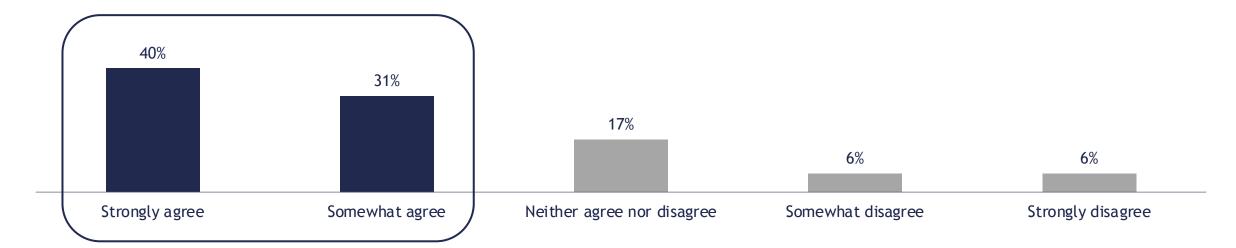




A majority of Texas residents agree that the state should be doing more to encourage businesses to build more energy resources.



The state should be doing more to encourage businesses to build different kinds of energy resources, such as solar, wind, small scale nuclear, and battery storage.



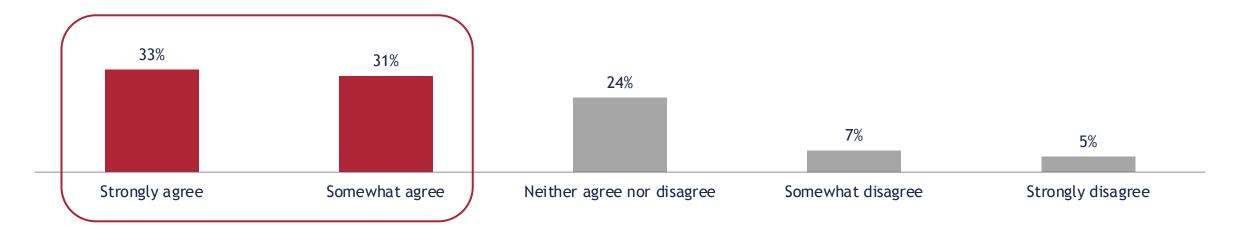




Nearly 2/3 of TX residents agree that increasing costs on renewable energy will in turn increase energy costs on consumers and businesses in the state.



Increasing costs on renewable energy, like solar and wind, through taxes or other means will increase energy costs on consumers and Texas businesses.





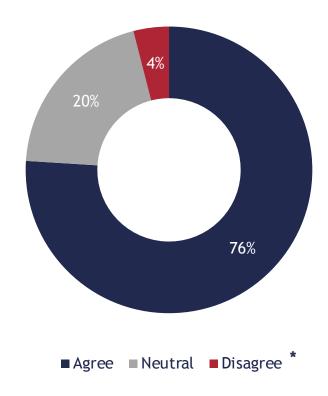


ENERGY ENTREPRENEURSHIP

3/4 of TX residents agree that individuals or groups in the state should have the ability to provide, and be compensated for providing, electricity back to the grid when needed.



Individuals or groups should be allowed to provide extra electricity back to the energy grid in times of need, and should be paid for the electricity they provide like any other energy source



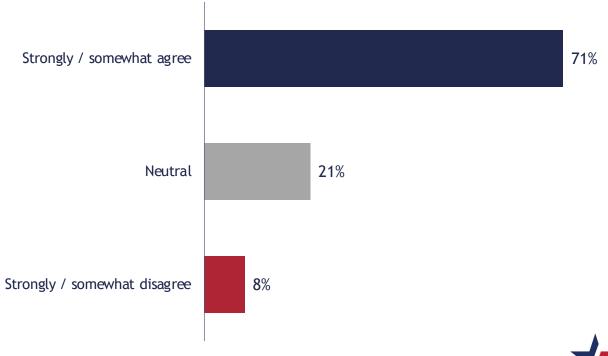




A majority of residents agree that leaders in the state should require compensation for EV owners who send electricity back to the grid when needed.



How strongly do you agree or disagree that Texas leaders should require compensation for vehicle owners who send power back to the grid in times of need?



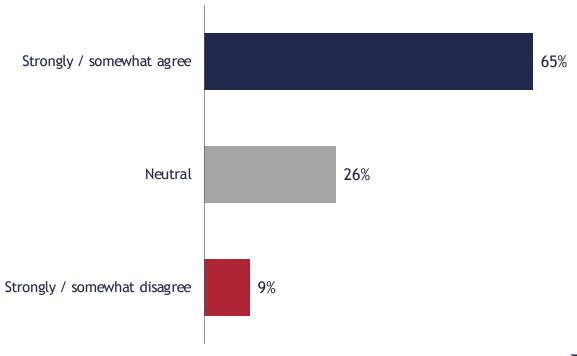




2/3 of residents agree that state decision makers should push harder to encourage residents to use energy more efficiently; 1/4 are neutral on the matter.



How strongly do you agree or disagree that Texas decision makers should be doing more to encourage Texans to more efficiently use energy?



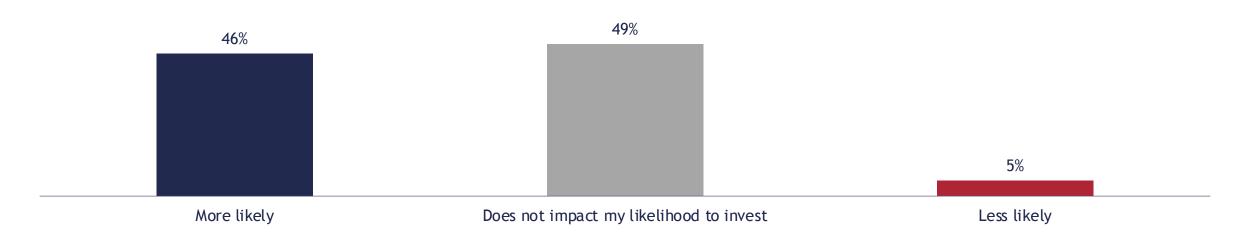




Nearly half of TX residents are unaffected by the possible profitability of sending energy back to the grid; a slightly smaller percentage of residents are more likely to invest in new energy technology because of this possibility.



Does the ability to sell back extra energy while assisting with grid reliability make you more or less likely to buy solar panels, an electric vehicle, or battery storage technology in the future?





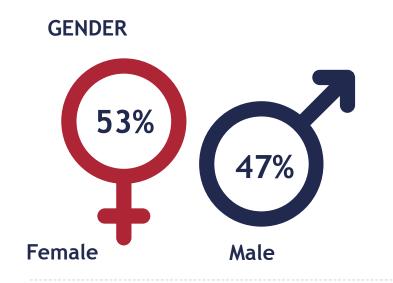


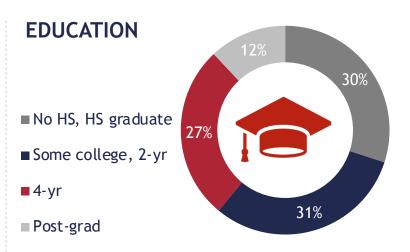
APPENDIX

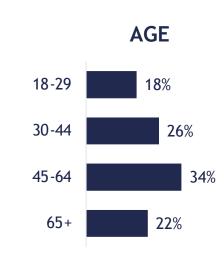


Demographics of Texas Survey

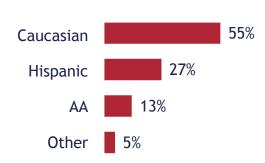


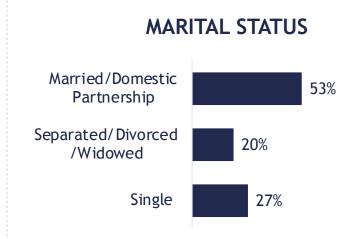


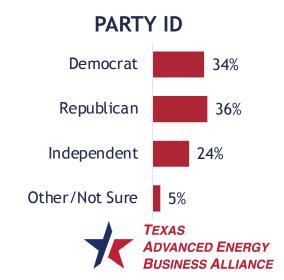














General demographics questions

Base: Total TX respondents, n=1029

Appendix: Questionnaire

[D1] Did you lose power during Winter Storm Uri in February?

<1> Yes <2> No

[D2] Did you lose running water during Winter Storm Uri?

<1> Yes

<2> No

[D3] Did your residence suffer damage as a result of the storm?

<1> Yes

<2> No

[q1_q6_grid] How much do you agree or disagree with the following statement?

- -[q1] I am concerned about the ability of the Texas energy grid to withstand future hurricanes, winter storms, severe drought, and intense heat waves.
- -[q2] Governor Abbott and other leaders have done enough to address the issues that lead to widespread outages during Winter Storm Uri.
- -[q3] Texas officials should do more to ensure that the energy grid can withstand future hurricanes, winter storms, and intense heat waves.
- -[q4] Increasing the amount of clean energy on the electric grid in Texas will address the failures that occurred in February 2021 during Winter Storm Uri.
- -[q5] Texas leaders should invest in programs that encourage people to reduce energy use at critical times to alleviate strain on the energy grid before building new power plants.
- -[q6] The cost of what I pay for energy, like electricity and home cooling and heating, is a great concern to me.
- <1> Strongly agree
- <2> Somewhat agree
- <3> Neither agree nor disagree
- <4> Somewhat disagree
- <5> Strongly disagree

[q8] Do you support legislation establishing state funding to help school districts purchase electric school buses and related vehicle-charging equipment?

- <1> Strongly support
- <2> Somewhat support
- <3> Neither support nor oppose
- <4> Somewhat oppose
- <5> Strongly oppose

Since they require much less fuel and maintenance, electric school buses can save school districts money in the long-run compared to gas-powered buses.

[q9] Would you support your local school district making the larger upfront investment in transitioning to electric buses? <1> Yes <2> No



Appendix: Questionnaire

Under the recently passed federal Infrastructure Investments and Jobs Act, Texas will receive more than \$400 million over the next 5 years to support the expansion of EV charging networks in the state. [q10] How important is it to you that Texas develop a comprehensive plan of how to use funds before receiving them?

- <1> Very important
- <2> Somewhat important
- <3> Neither important or unimportant
- <4> Somewhat unimportant
- <5> Very unimportant

[q11] Do you support legislation that would allow electric vehicle manufacturers such as Tesla and Rivian to sell directly to consumers online without a traditional automobile dealerships car lot?

- <1> Yes
- <2> No

[q12] Do you think that EV drivers should be taxed at a rate that is more than, less than, or about the same as drivers of cars that use gasoline?

- <1> EV drivers should be taxed at a higher rate than drivers of cars that use gasoline
- <2> EV drivers should be taxed at the same rate as drivers of cars that use gasoline
- <3> EV drivers should be taxed at a lower rate than drivers of cars that use gasoline

[q13] Do you support increasing state funding for electric vehicle chargers to ensure charging stations are in every part of the state? <1> Yes <2> No

[q15_q17_grid] How much do you agree or disagree with the following statement?

- -[q15] The state should be doing more to encourage businesses to build different kinds of energy resources, such as solar, wind, small scale nuclear, and battery storage.
- -[q17] Increasing costs on renewable energy, like solar and wind, through taxes or other means will increase energy costs on consumers and Texas businesses.
- <1> Strongly agree
- <2> Somewhat agree
- <3> Neither agree nor disagree
- <4> Somewhat disagree
- <5> Strongly disagree

How much do you agree or disagree with the following:

[q18] Locally-produced energy, from sources like electric vehicles and homes with solar panels - whether provided by an individual customer or a group of customers, such as a neighborhood or an apartment complex - should be allowed to provide extra electricity back to the energy grid in times of need, and should be paid for the electricity they provide like any other energy source.

- <1> Strongly agree
- <2> Somewhat agree
- <3> Neither agree nor disagree
- <4> Somewhat disagree
- <5> Strongly disagree



Appendix: Questionnaire

When plugged into a home's electrical outlet, some electric vehicles can send power back to the grid. Using this ability at times when Texas' energy needs are high can help reduce strain on the electrical grid and enhance grid reliability. [q16a] How strongly do you agree or disagree that Texas leaders should require compensation for vehicle owners who send power back to the grid in times of need?

- <1> Strongly agree
- <2> Somewhat agree
- <3> Neither agree nor disagree
- <4> Somewhat disagree
- <5> Strongly disagree

Innovative technologies owned by customers can help utilities be more reliable. Examples include solar energy, electric cars, battery storage and other neighborhood energy resources. Not only do they help local utilities, these technologies can also provide a source of income to their owners.

[q19] Does the ability to sell back extra energy while assisting with grid reliability make you more or less likely to buy solar panels, an electric vehicle, or battery storage technology in the future?

- <1> More likely
- <2> Does not impact my likelihood to invest
- <3> Less likely

Technologies and programs that encourage more efficient energy use, and encourage people to use less energy in times of crisis, can help utilities with energy reliability and lower electric bills. [q20] How strongly do you agree or disagree that Texas decision makers should be doing more to encourage Texans to do this?

- <1> Strongly agree
- <2> Somewhat agree
- <3> Neither agree nor disagree
- <4> Somewhat disagree
- <5> Strongly disagree

