



November 18, 2010
E2 (Energy + Environment)
National Survey Results

Market Strategies International E2 (Energy + Environment) Research Program

- The intersection of Energy and Environmental issues.
- Knowledgeable “insider” perspective, focused on strategic energy industry issues.
- Nine waves completed since 2007. Most recently, a total of 1,168 interviews completed October 14 through October 25, 2010 with consumers nationwide.
- Online panel – demographically balanced, yet not a truly random probability sample of U.S. consumers.

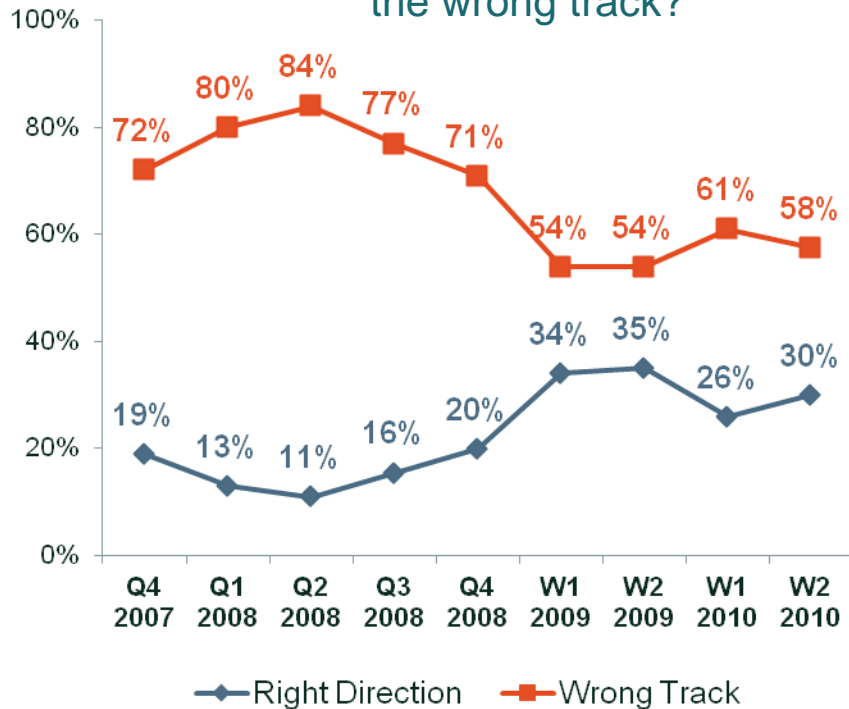
Part 1

Public Attitudes on Energy + Environment



Majorities feel both the energy and environmental situations in the country are on the wrong track.

Is the **energy situation** we face today headed in the right direction or are we on the wrong track?



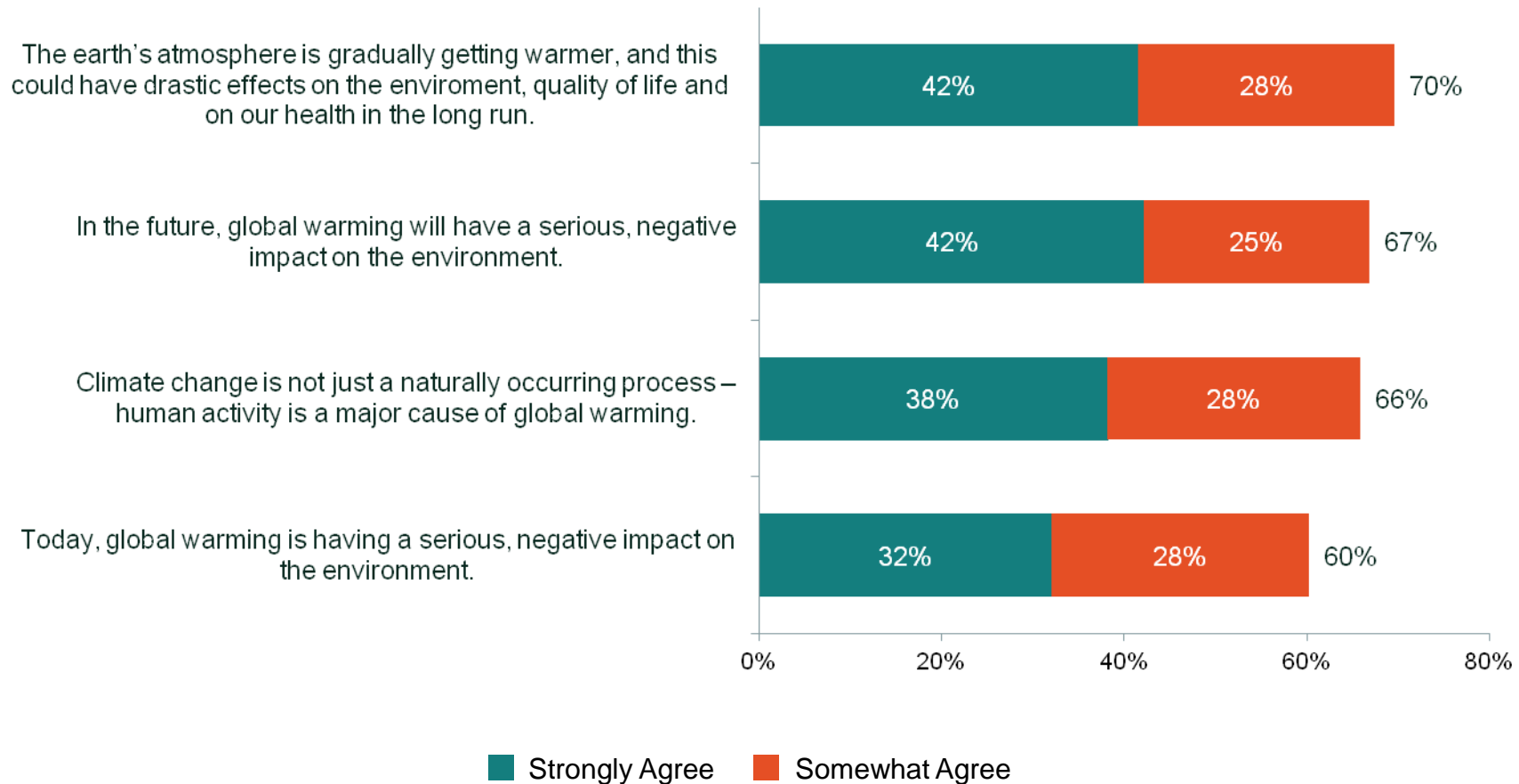
Q2. When you think about the overall energy situation we face today as a nation and how we are addressing it, do you think the U.S. is headed in the right direction or are we off on the wrong track?

Is the **environmental situation** we face today headed in the right direction or are we on the wrong track?



Q4. When you think about the environmental situation we face today as a nation, and how we are addressing it, do you think the U.S. is headed in the right direction, or are we off on the wrong track?

Most believe global warming is real, is human-caused, poses an immediate threat, and will have serious negative impacts in the future.



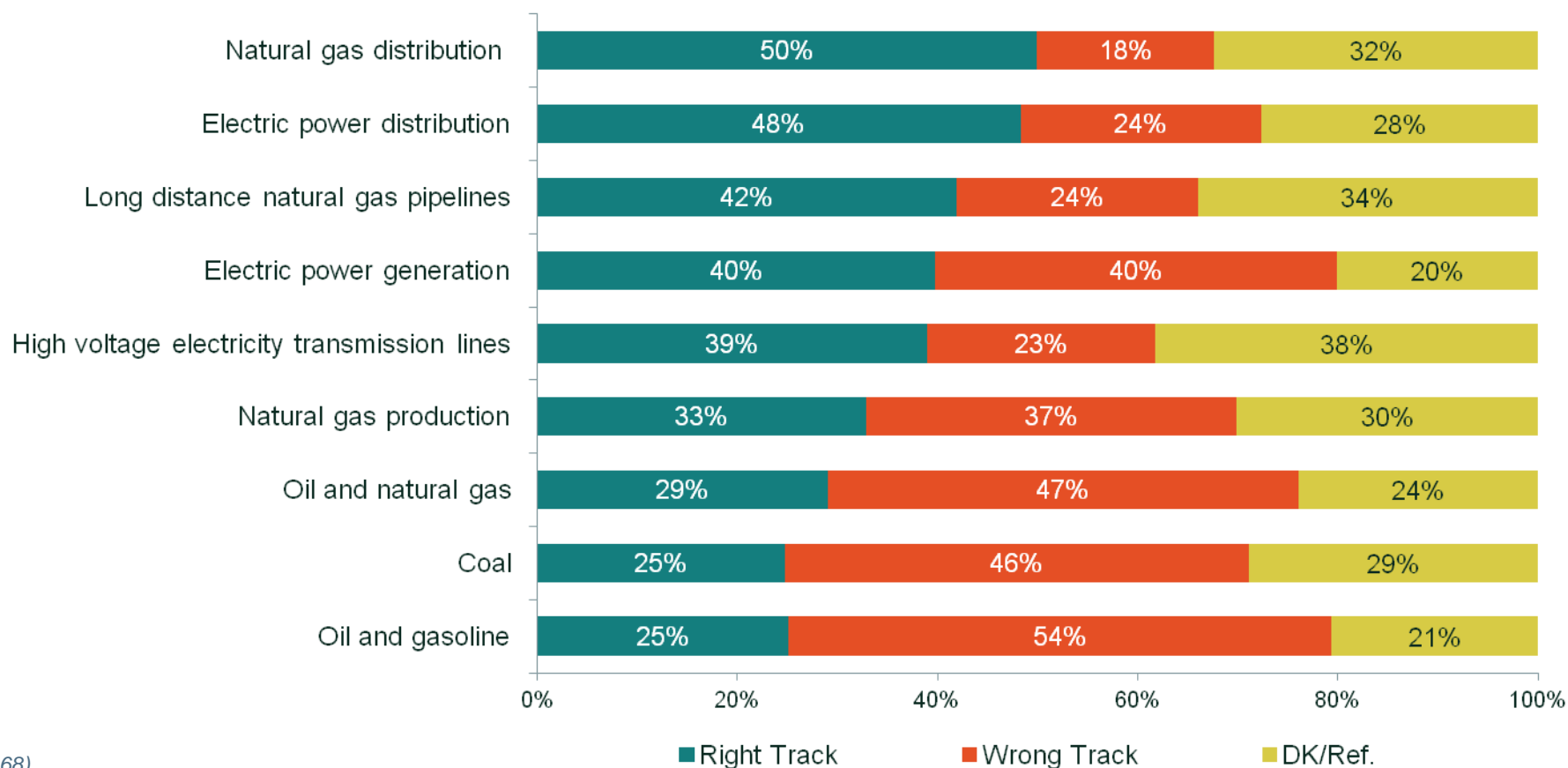
(n=1168)

Q18-Q18C.. Please indicate whether you agree or disagree with the following statements.

Part 2
Views of the Energy Industry

About half view electric and natural gas distribution systems as “on the right track,” while only a quarter view the coal and oil gasoline industries as “on the right track.”

Right Direction/Wrong Track

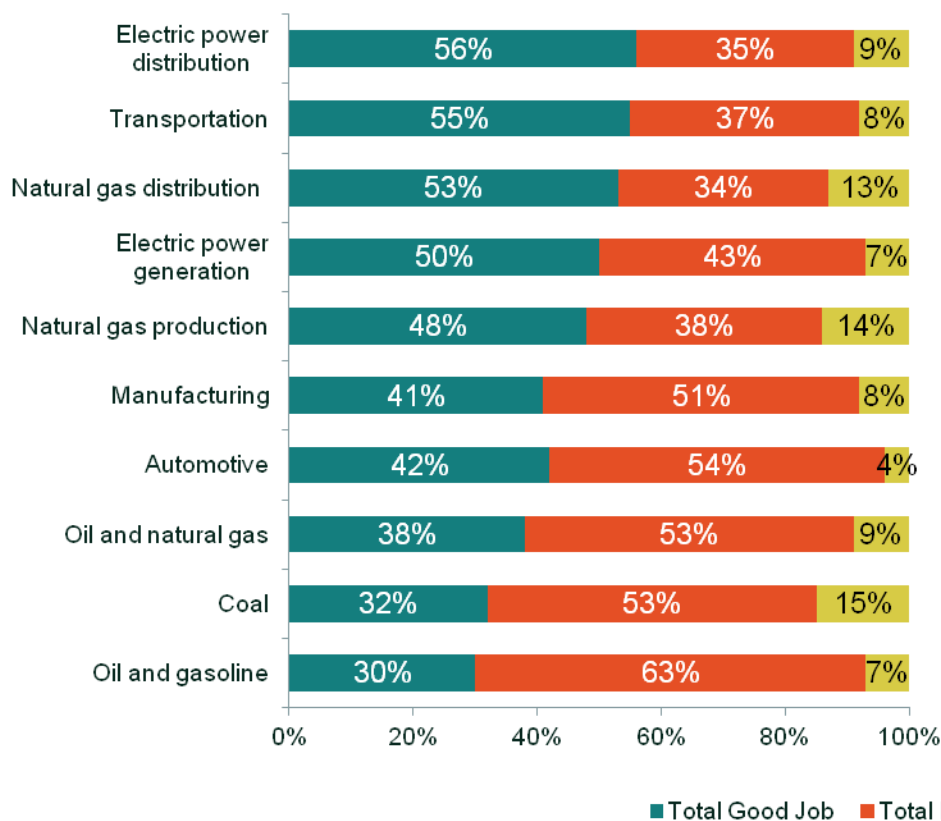


(n=1168)

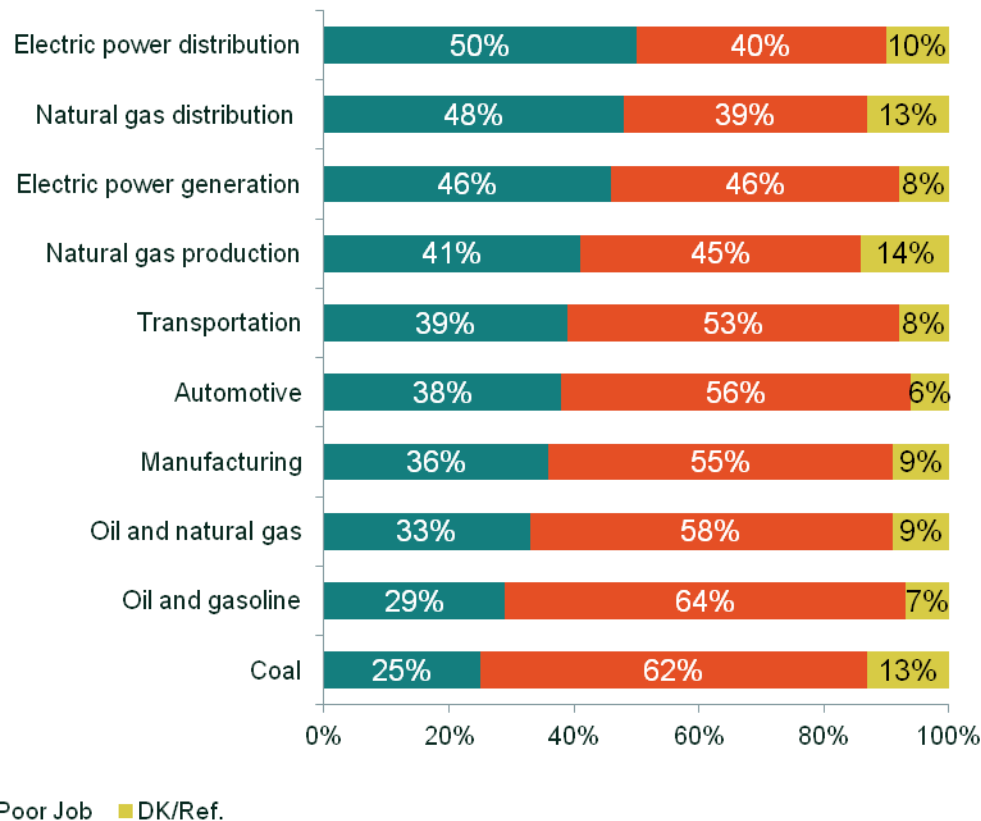
Q6A/I. For each of the following, please indicate whether you think the US is headed in the right direction, or are we off on the wrong track?

Energy distribution also scores highest among energy sectors on economic and environmental performance.

Contribute to Economic Well-Being



Protect the Environment

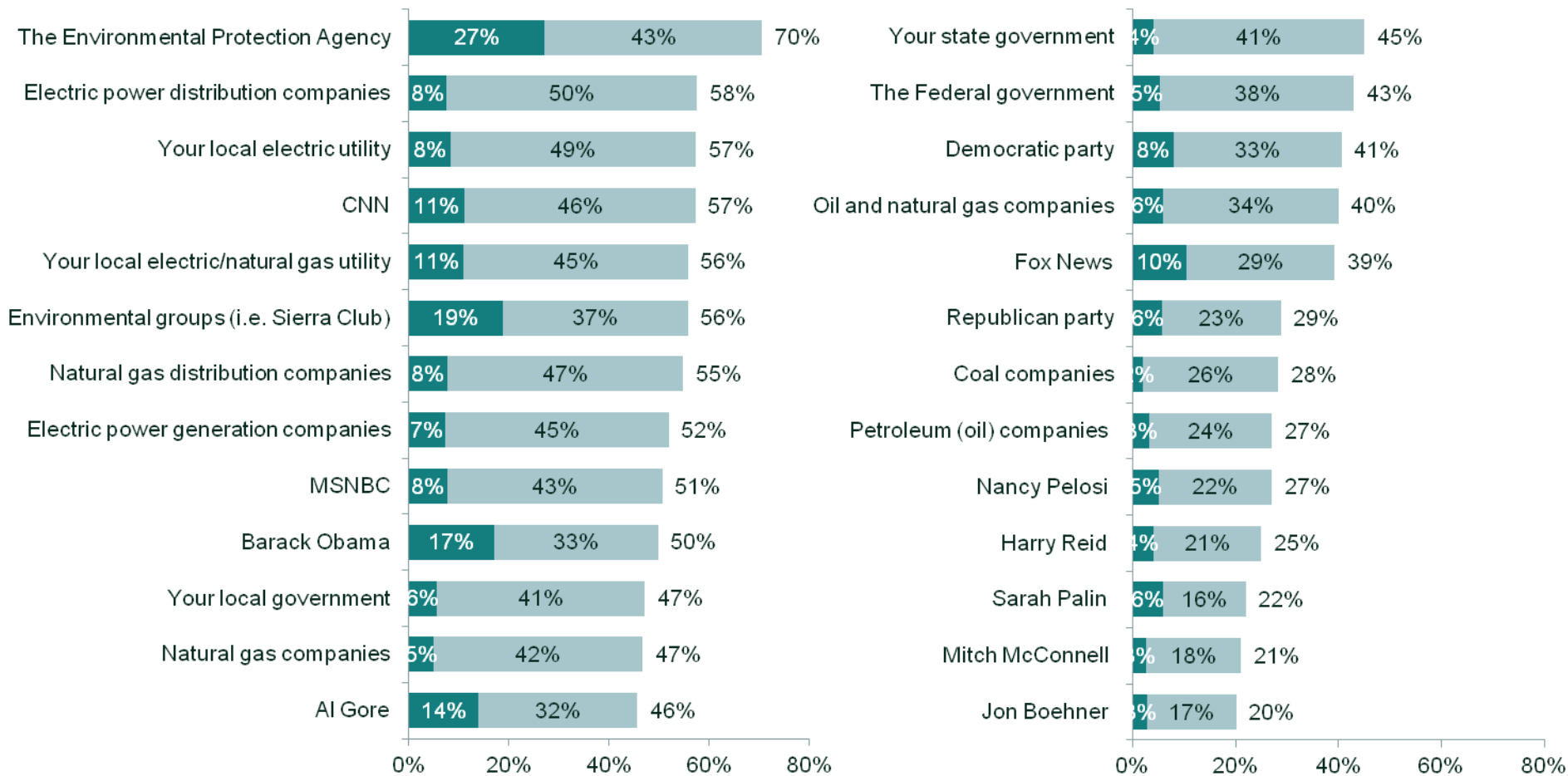


(n=1168)

Q7A/J. Please indicate how good a job you feel each of the following industries are doing in contributing to the economic well-being of the U.S. today.

Q8A/J. Please indicate how good a job each of the following industries is doing when it comes to protecting the environment.

Local utilities remain among the most credible sources of environmental information, though fewer deem them to be “very” credible.



(n=1168)

Very Credible Somewhat Credible

Q23AA/YY. When it comes to information on environmental issues, how credible do you find each of the following sources to be?

Part 3
The E2 Index:
One Key Number

MSI's E2 (Energy + Environment) Index

- **The index provides a summary measure of US public opinion on:**
 - How good a job key industries are doing in contributing to the economic well-being of the US today.
 - How good a job key industries are doing when it comes to protecting the environment.
 - Credibility of selected sources when it comes to information on environmental issues.

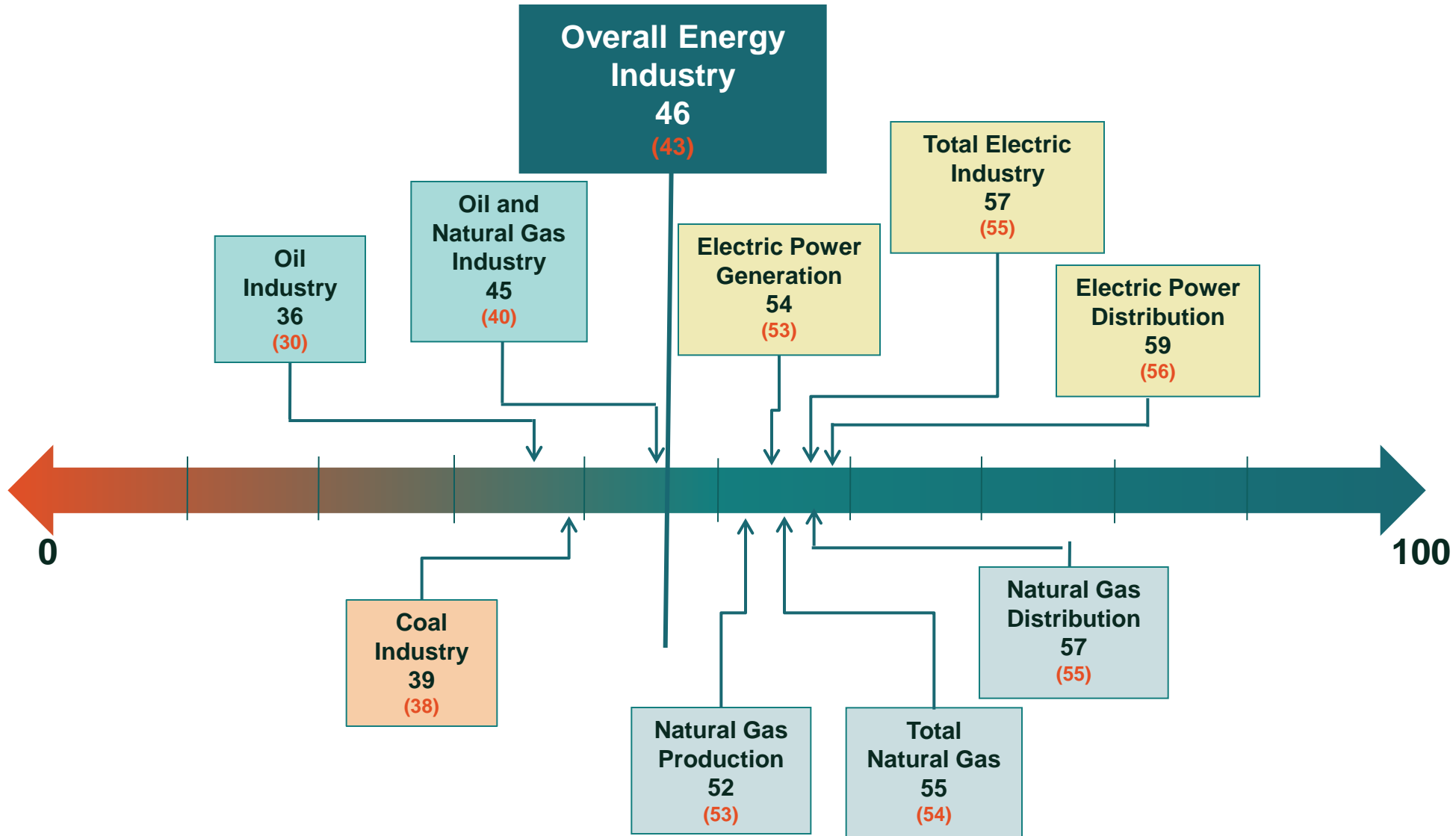
- **As we track it over time, the index:**
 - Registers changes in public opinion.
 - Gauges potential for public support for industry positions on key issues.

The E2 Index is up three points compared to the low of 43 during the Gulf oil spill, but has not fully recovered to the score of 48 seen one year ago.

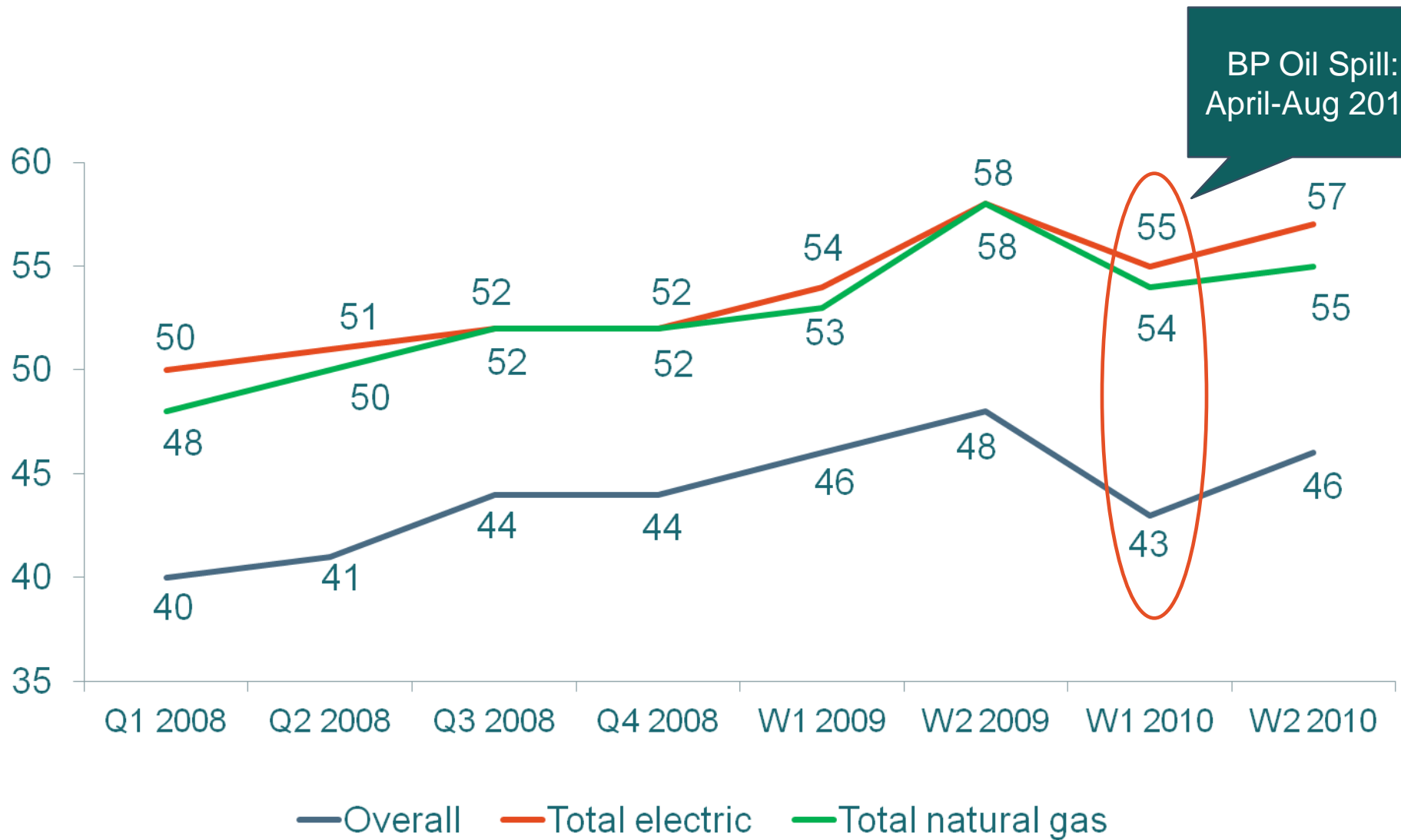
	Electric Industry			Coal Industry	Natural Gas Industry			Petroleum Industry		Energy Industry
	Electric Power Generation	Electric Power Distribution	Total Electric Industry		Natural Gas Production	Natural Gas Distribution	Total Natural Gas Industry	Oil	Oil and Natural Gas	
Economic Performance	57	61	59	48	57	61	59	42	49	51
Environmental Performance	54	58	56	41	53	57	55	39	44	47
Environmental Credibility	52	58	55	28	47	55	51	27	41	40
E2 Index	54	59	57	39	52	57	55	36	45	46
% Right Direction	40%	48%	44%	25%	33%	50%	41%	26%	29%	33%

The overall Energy Industry Index is up 3 points from last Spring (Wave 1 2010: 43), but is down 2 points from one year ago (Wave 2 2009: 48).

Wave 2 2010 E2 Index (Wave 1 2010)



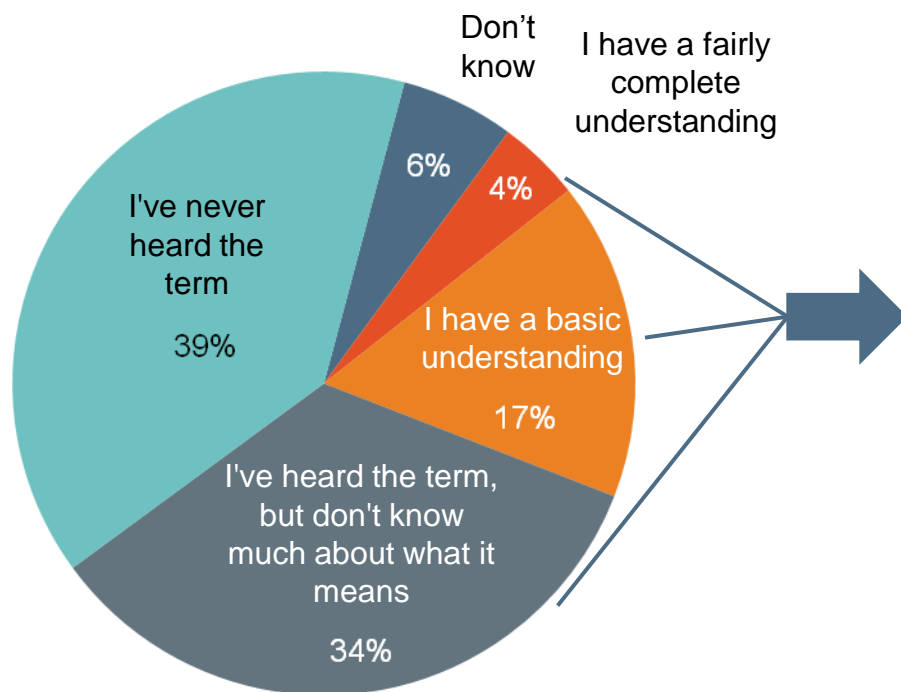
E2 Trends



Part 4
Smart Grid/Smart Meter

Americans remain under-informed about Smart Grid: about three-quarters say they know nothing or very little about the concept.

Which of the following statements comes closest to describing your current knowledge about Smart Grid?

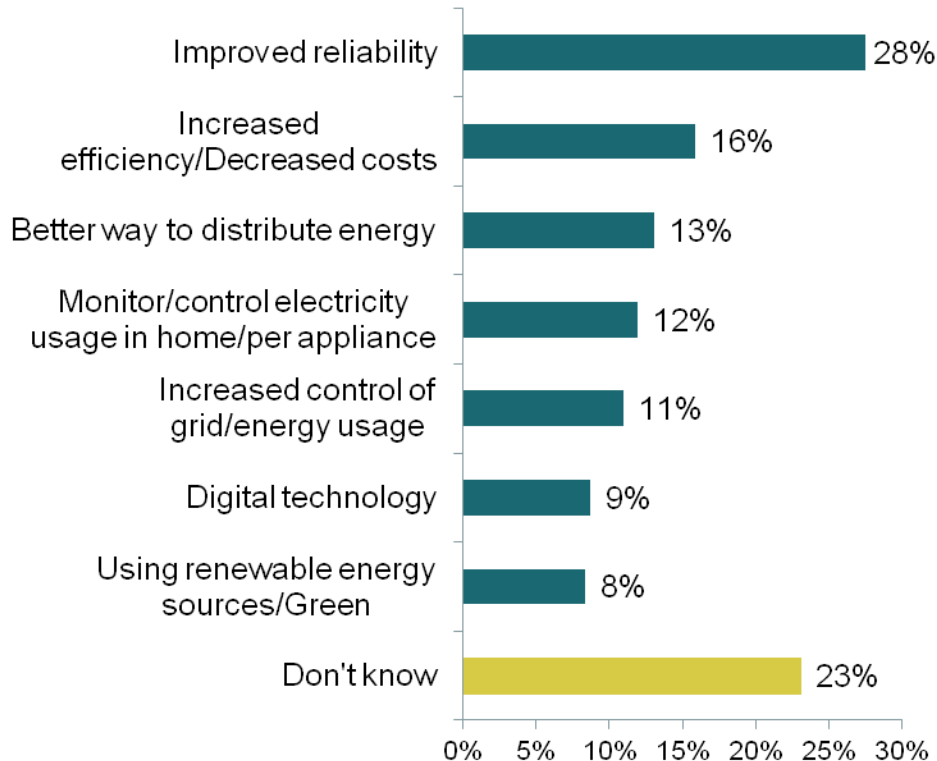


(n=1168)

QSG2. Which of the following statements comes closest to describing your current knowledge about Smart Grid?

QSG3. How would you describe Smart Grid, and how is it different from the electrical grid that serves most of America today?

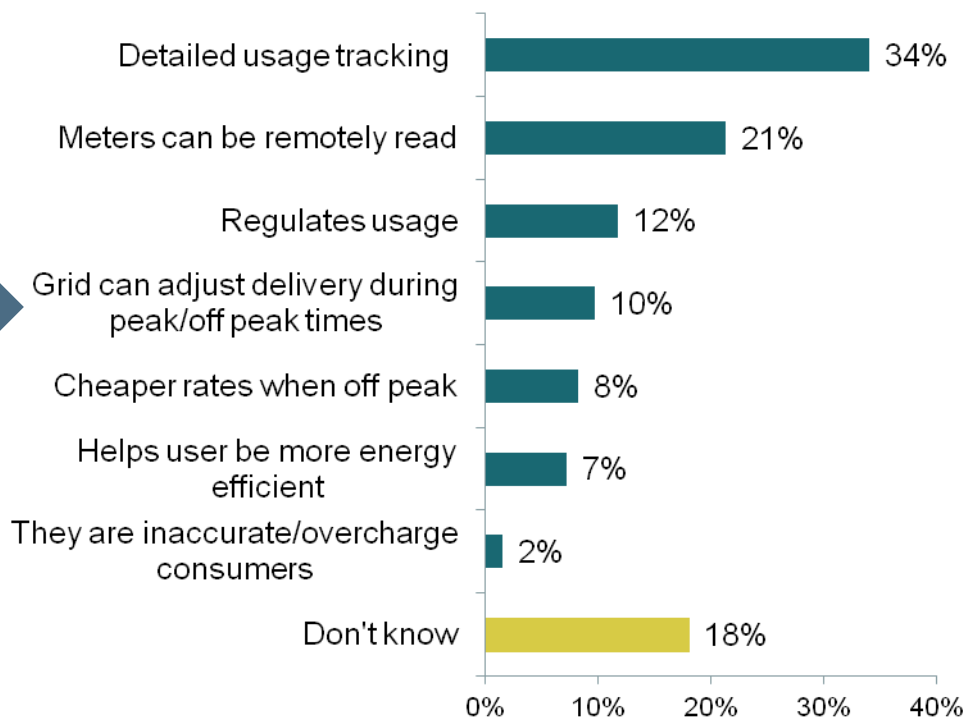
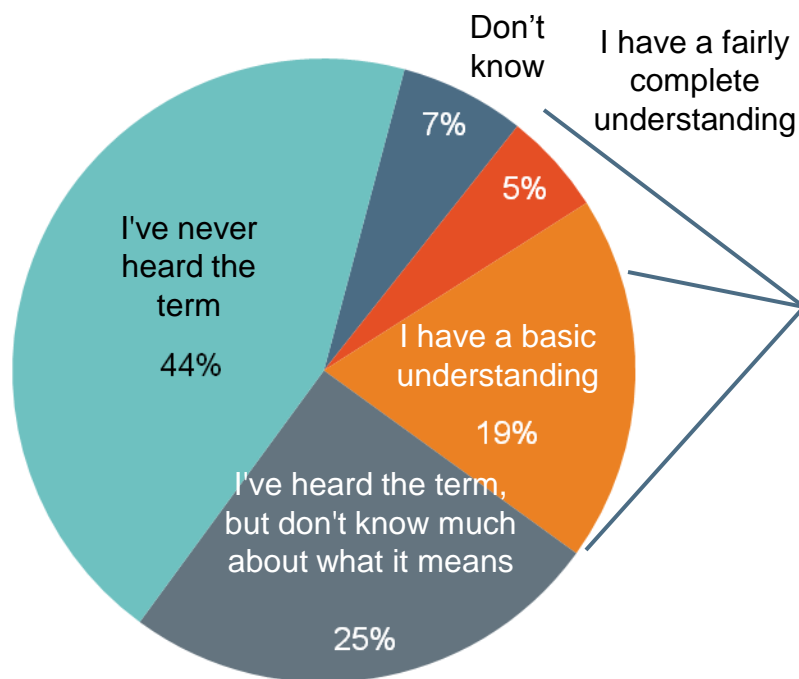
How would you describe Smart Grid, and how is it different from the electrical grid that serves most of America today? (n=650)



About seven in ten know little or nothing about the term “Smart Meter.” Less than one-quarter say they understand the concept.

Which of the following statements comes closest to describing your current knowledge about Smart Meter?

How would you describe a Smart Meter, and how is it different from the electric meters in most American homes today? (n=589)



(n=1168)

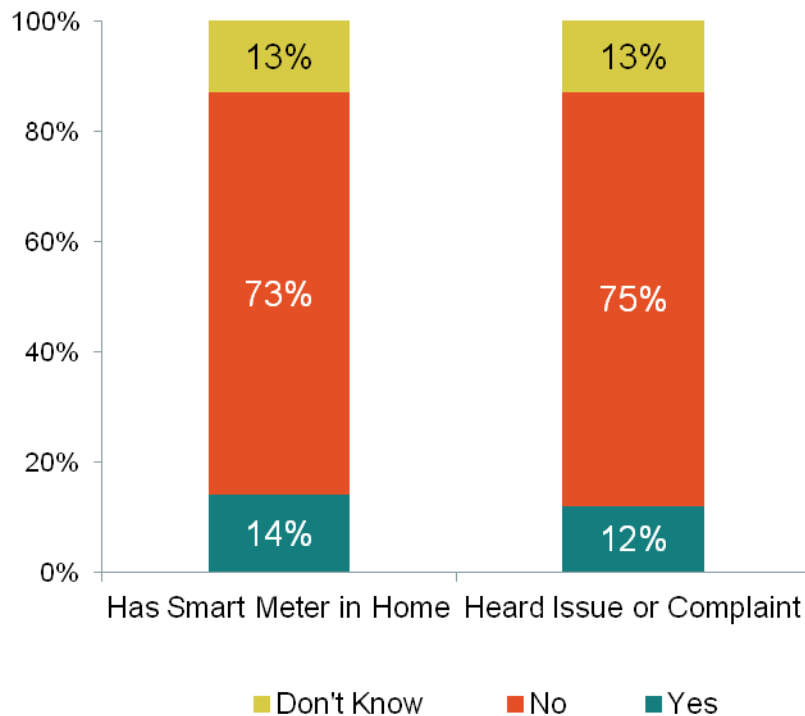
QSG5. Which of the following statements comes closest to describing your current knowledge about Smart Meters?

QSG3Y. How would you describe a Smart Meter, and how is it different from the electric meters in most American homes today?



Approximately 14% of Americans report having a Smart Meter in their home; 12% say they have heard something negative about the technology.

14% = approximately 15M households. Smart Grid Watch claims over 16M meters have been installed.

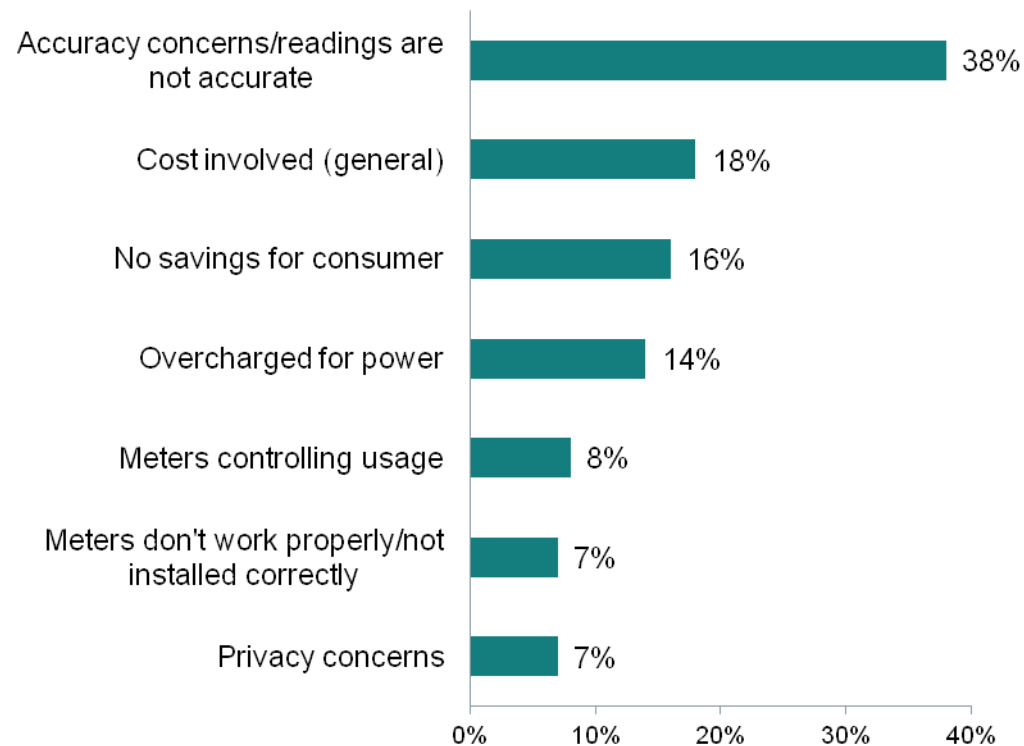


(n=1168)

QSG3C. Do you currently have a Smart Meter installed in your home?

QSG3a. In the past year, have you read seen or heard about any issues or complaints being raised about Smart Meters?

What were the specific issues or complaints?
(n=138)





Given low awareness, we provided definitions, then asked about support for Smart Grid/Meter technologies at various price points.

“The costs of implementing these new Smart Grid/Smart Meter technologies would be paid through an additional charge on each customer’s monthly electric bill. For residential customers, the new charge is estimated to be:

\$2.00-\$5.00 per month (n=250)

\$6.00-\$10.00 per month (n=250)

\$11.00-\$15.00 per month (n=250)

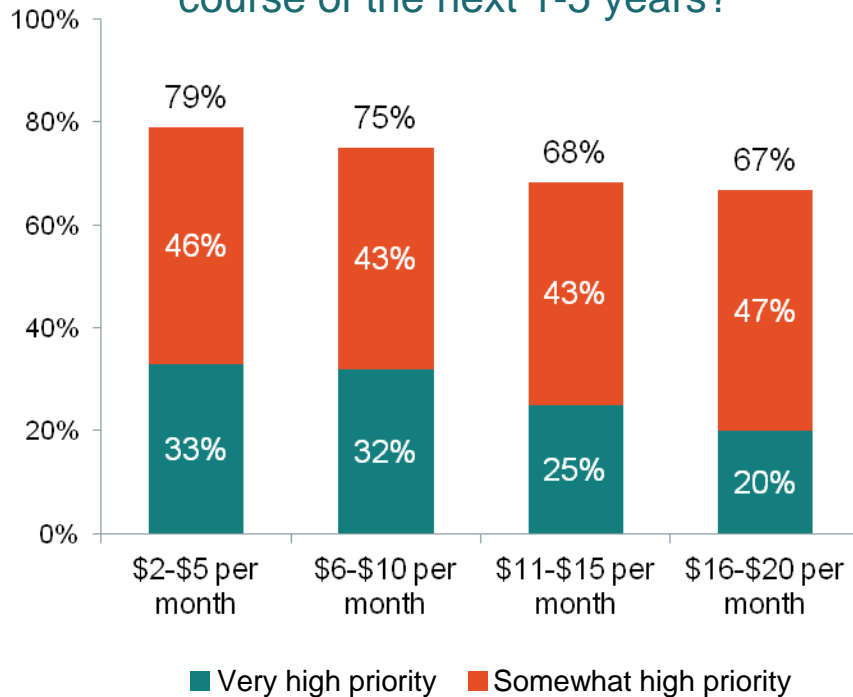
\$16.00-\$20.00 per month (n=250)

Customers who use the new information and options to help them make smart energy-use choices will be able to save more than that on their electricity costs – so, overall, they will have the opportunity to pay less for electricity.”

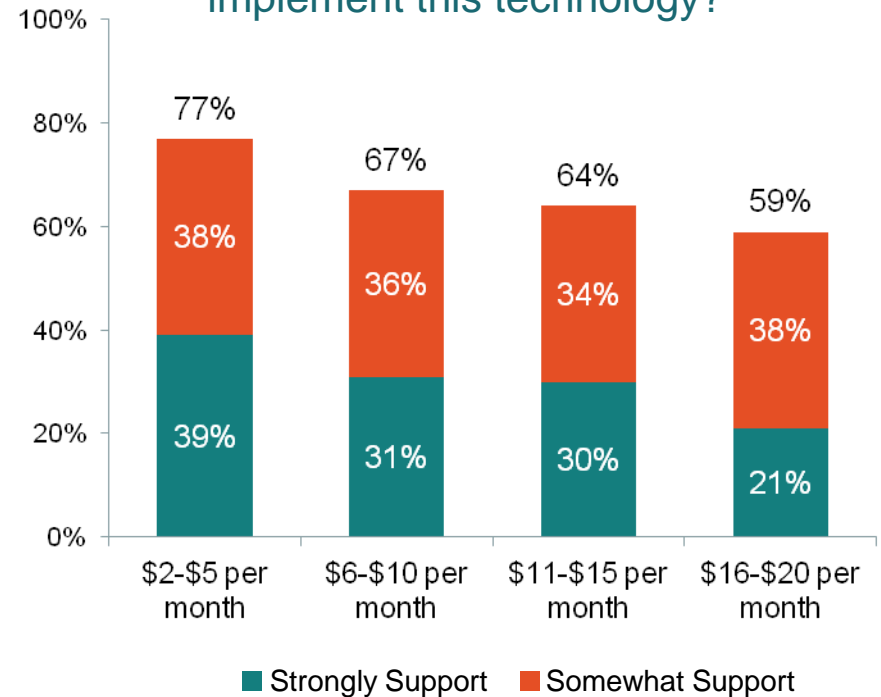
*Customers were evenly split into four groups, with each group being read a different price-point.

A large majority feel Smart Grid/Meter is a priority and support their utility implementing this technology; cost has a moderate impact on support.

How high a priority is implementing Smart Grid/Smart Meter technology over the course of the next 1-5 years?



Do you support the idea that your electric utility should start now and work quickly to implement this technology?



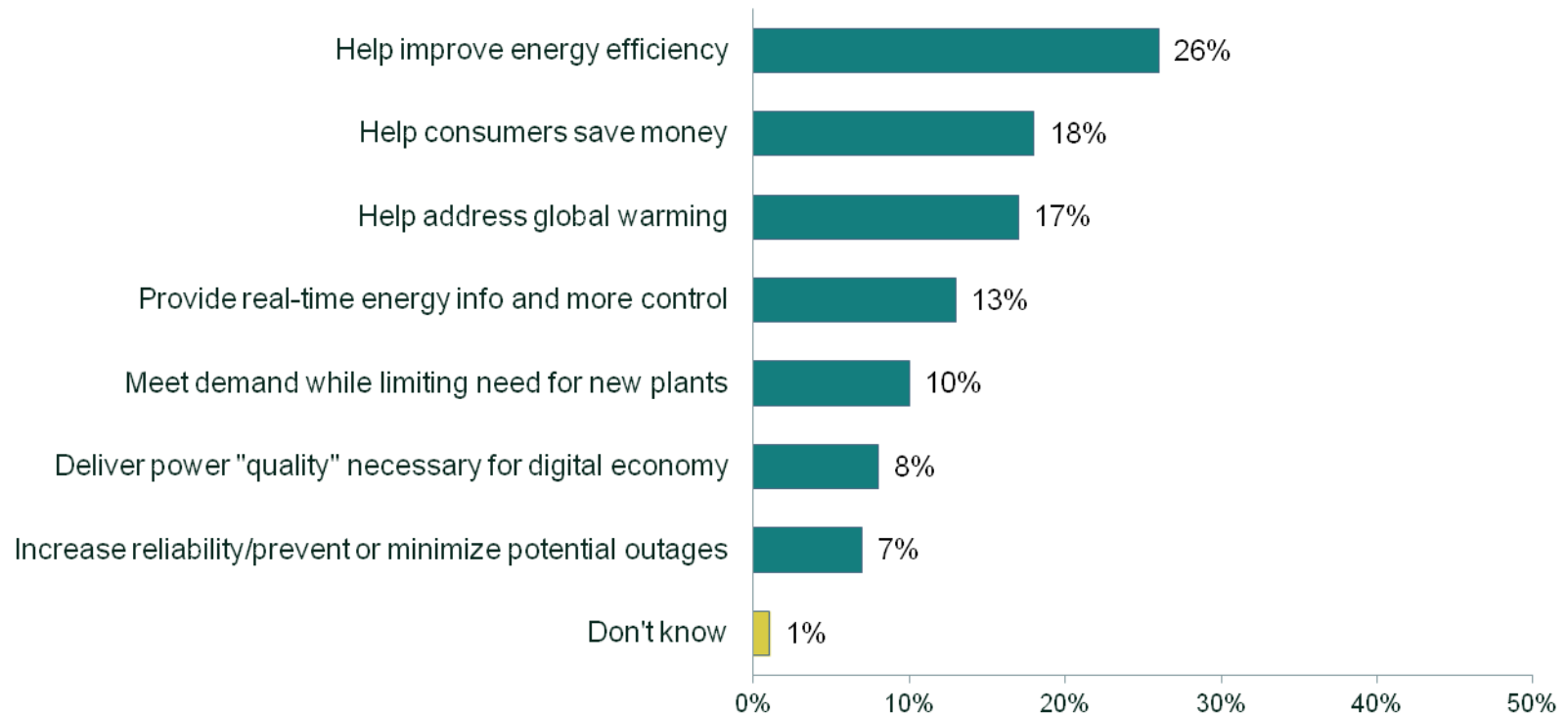
(n=250)

QSG7. Based on the information provided, how high a priority do you think it should be for local, state, and Federal governments, along with electricity providers, to begin implementing Smart Grid/Smart Meter technology over the next one to five years?

QSG7A. Please indicate whether you support the idea that your electric utility should start now and work quickly to begin implementing Smart Grid and Smart Meter technology.

Energy efficiency, saving money, and curbing global warming are top reasons for support.

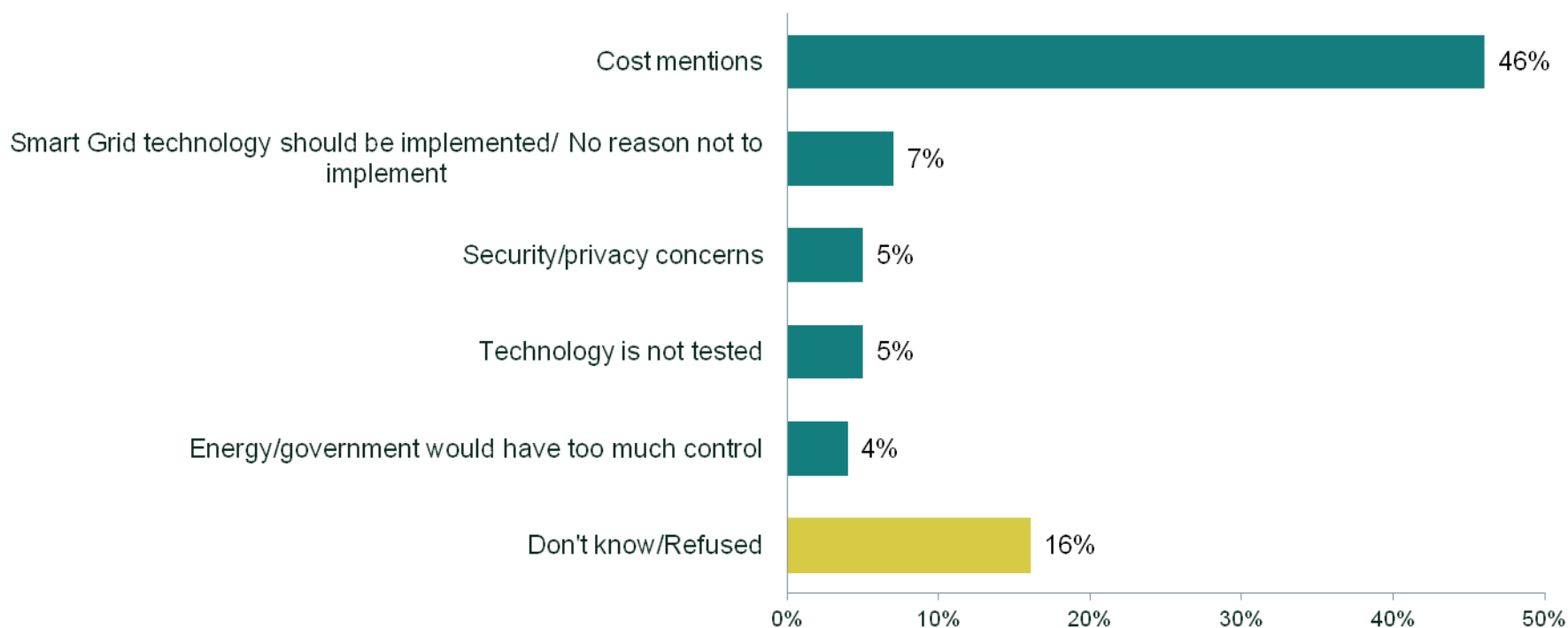
Reasons for implementing Smart Grid/Smart Meter technology Support the technology (n=790)



QSG7B2. Which of the following would you say is the most convincing reason to begin implementing Smart Grid/Smart Meter technology?

The key concern about Smart Grid or Meters is the cost.

Top reasons for NOT implementing Smart Grid/Smart Meter Technology



(n=1168)

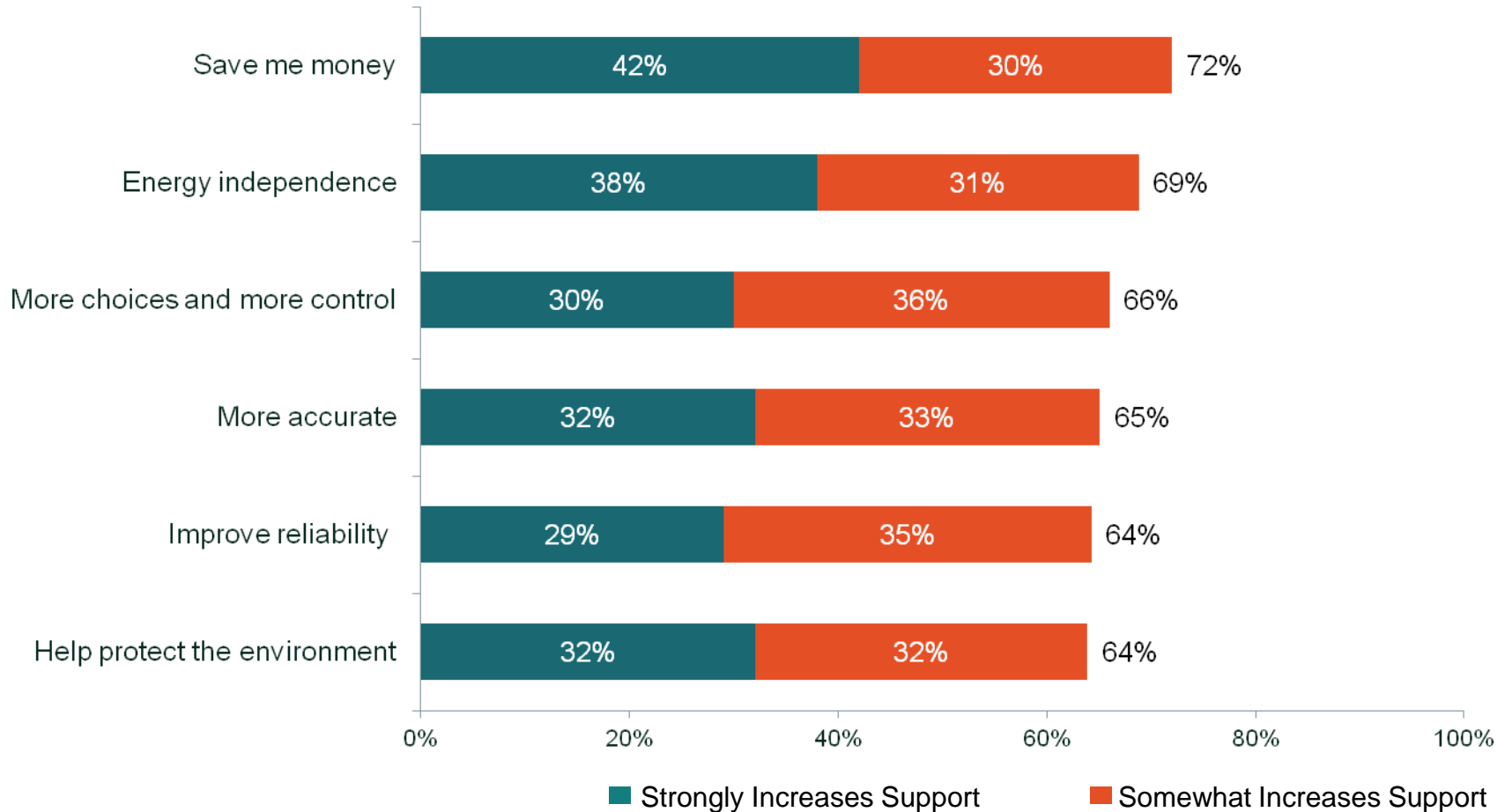
QSG7C. And what would you say is the most important reason NOT to begin implementing Smart Grid/Smart Meter technology?

Statements measured for influence on Smart Meter support:

- Smart Meters will enable me to **help protect the environment**. I can receive information from a Smart Meter that will help me use less electricity. This will help reduce the need to build more power plants that emit harmful carbon, helping to protect the environment for future generations.
- Smart Meters will **save me money**. The information provided by my Smart Meter will give me more control of my home energy use, helping me make smarter energy decisions, ultimately saving me money that can be used to meet other household needs.
- Smart Meters are **more accurate** and will help me feel confident that I am being billed correctly and fairly by my utility.
- Smart Meters will **improve reliability**, giving me added peace of mind about my electric service. New Smart Meters will help my utility manage power outages more effectively, meaning more timely power restoration and more reliable service.
- Smart Meters support **energy independence** for America. New Smart Meters will make it easier to connect “green technologies” like electricity generated by solar and wind power to the nation’s electric grid, helping to ensure a more independent and secure energy future.
- Smart Meters will give me **more choices and more control**. A new Smart Meter will enable me to sign up for a range of rate and billing programs, providing more flexibility in how I’m billed for electric usage and more control over my energy costs.

Seven-in-ten say that the message touting the money saving aspect of Smart Meters increases support.

Statements to Increase Support for Installing a Smart Meter



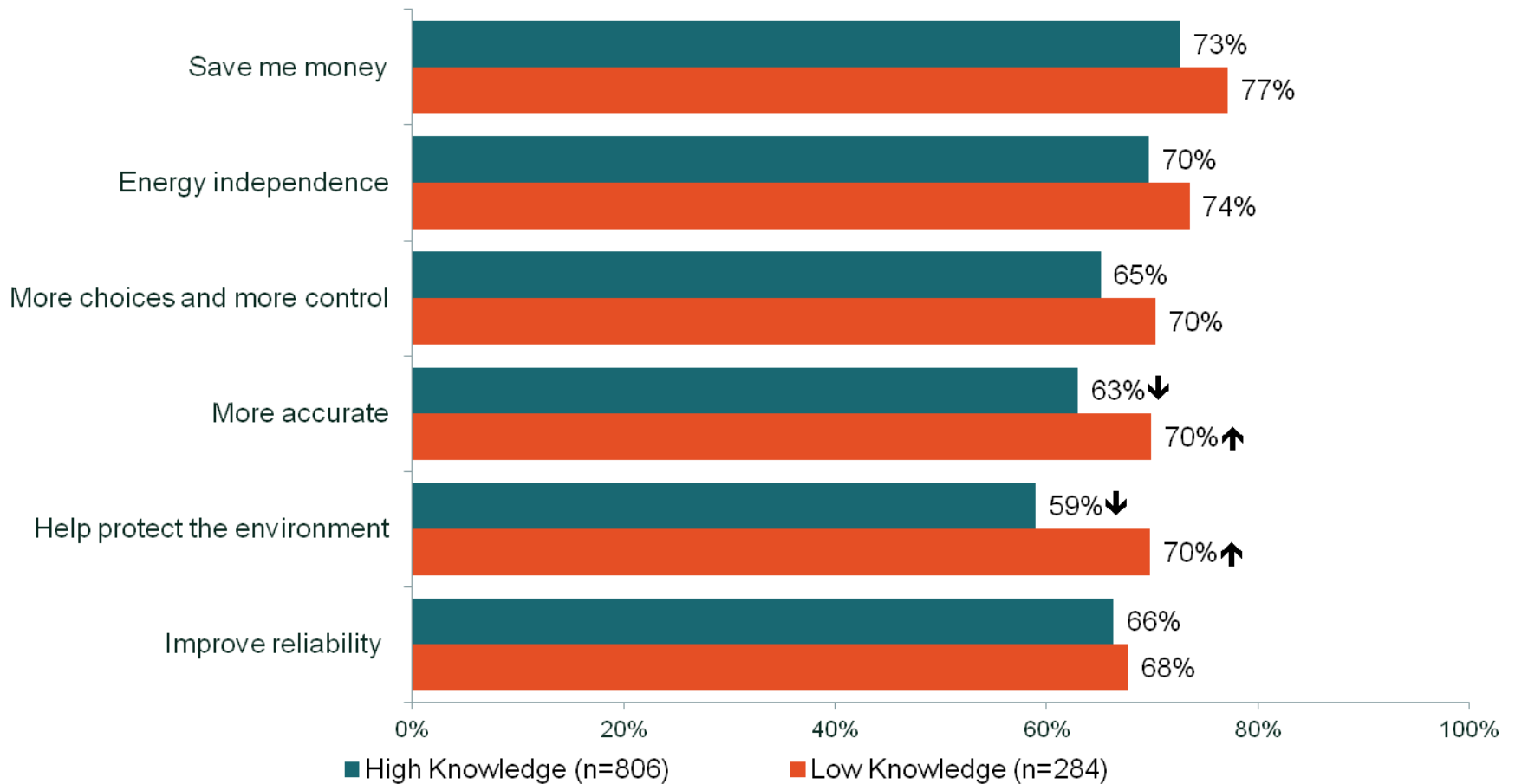
(n=1168)

SM1-6. Please indicate how much it increases or decreases your support for going ahead with installing Smart Meters.



Customers with low knowledge say all of the messages increase their support in greater numbers than those with higher levels of knowledge.

Statements to Increase Support for Installing a Smart Meter Messages



(n=1168)

SM1-6. Please indicate how much it increases or decreases your support for going ahead with installing Smart Meters.
 QSG5. Which of the following statements comes closest to describing your current knowledge about Smart Meters?
 Arrows indicate significant differences between low knowledge and high knowledge.

Message receptivity varies by demographics:

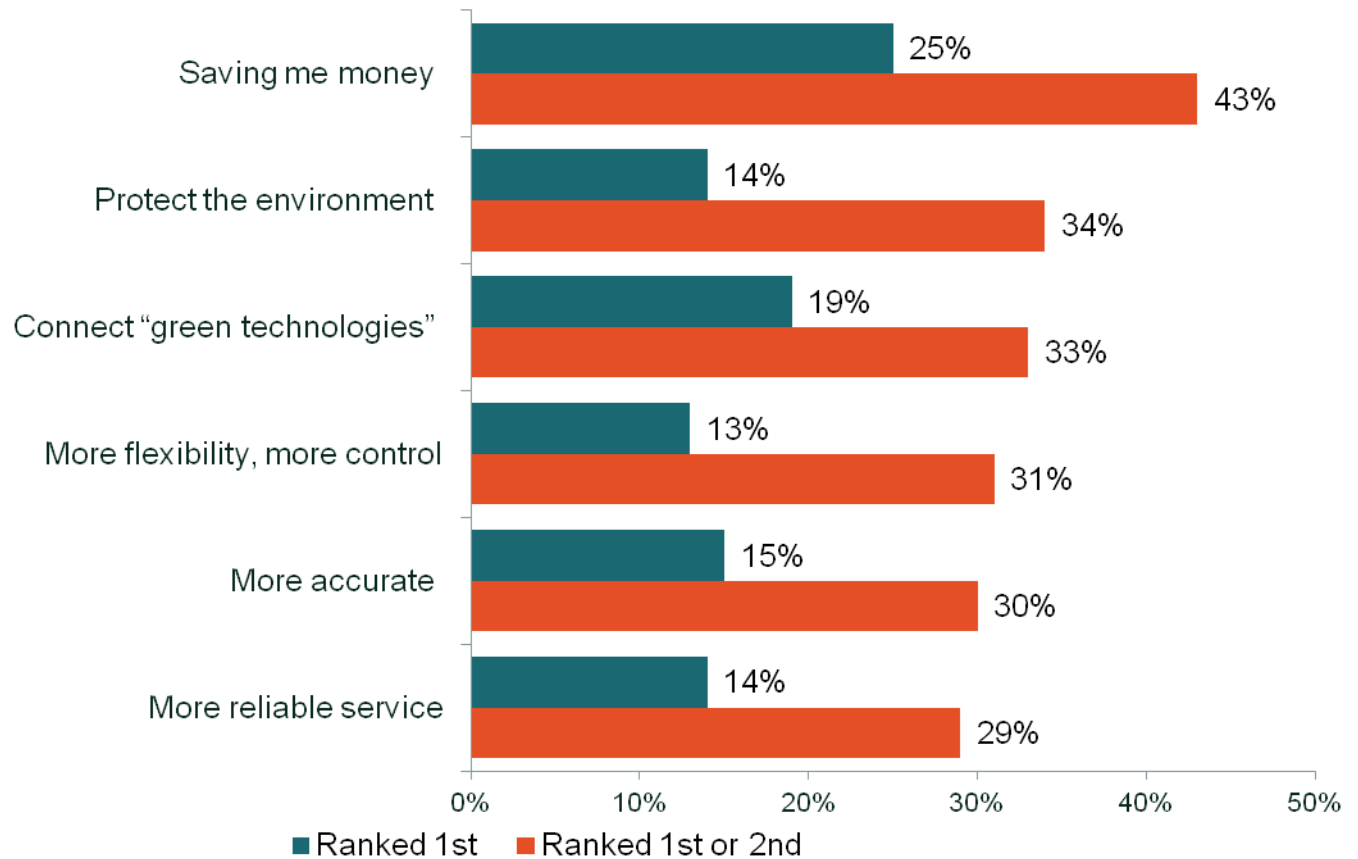
- Women are more influenced than men by the message about protecting the environment.
- African Americans are the group most influenced by the messages that stress accurate billing and more choices and control.
- Those with higher education are more influenced by the energy independence message.

Statements for evaluating Smart Meter attribute importance:

- I can receive information from a new Smart Meter that will help me become more efficient in my home, which will reduce overall demand for electricity and reduce the need to build more power plants that emit harmful carbon into the air, helping to **protect the environment** for future generations.
- The information provided to me by my Smart Meter will give me more control of my home energy use, helping me make smarter energy decisions, ultimately **saving me money** that can be used to meet other family needs.
- Since Smart Meters are **more accurate** than traditional electric meters, these new meters will help me feel that I am being billed correctly and fairly by my utility, giving me more confidence in my utility.
- New Smart Meters will help my utility more effectively manage power outages in my area, meaning more timely power restoration and **more reliable service**, giving me peace of mind about my electric service.
- New Smart Meters will make it easier to **connect “green technologies”** like electricity generated by solar and wind power to the nation’s electric grid, helping to ensure a more secure energy future.
- New Smart Meters will ultimately enable me to sign up for a range of rate and billing programs in my home that will give me **more flexibility** in how I’m billed for electric usage and **more control** over my energy costs.

One quarter of customers say the money saving aspect of Smart Meter is the most important attribute.

Most Important Reasons for Installing a Smart Meter

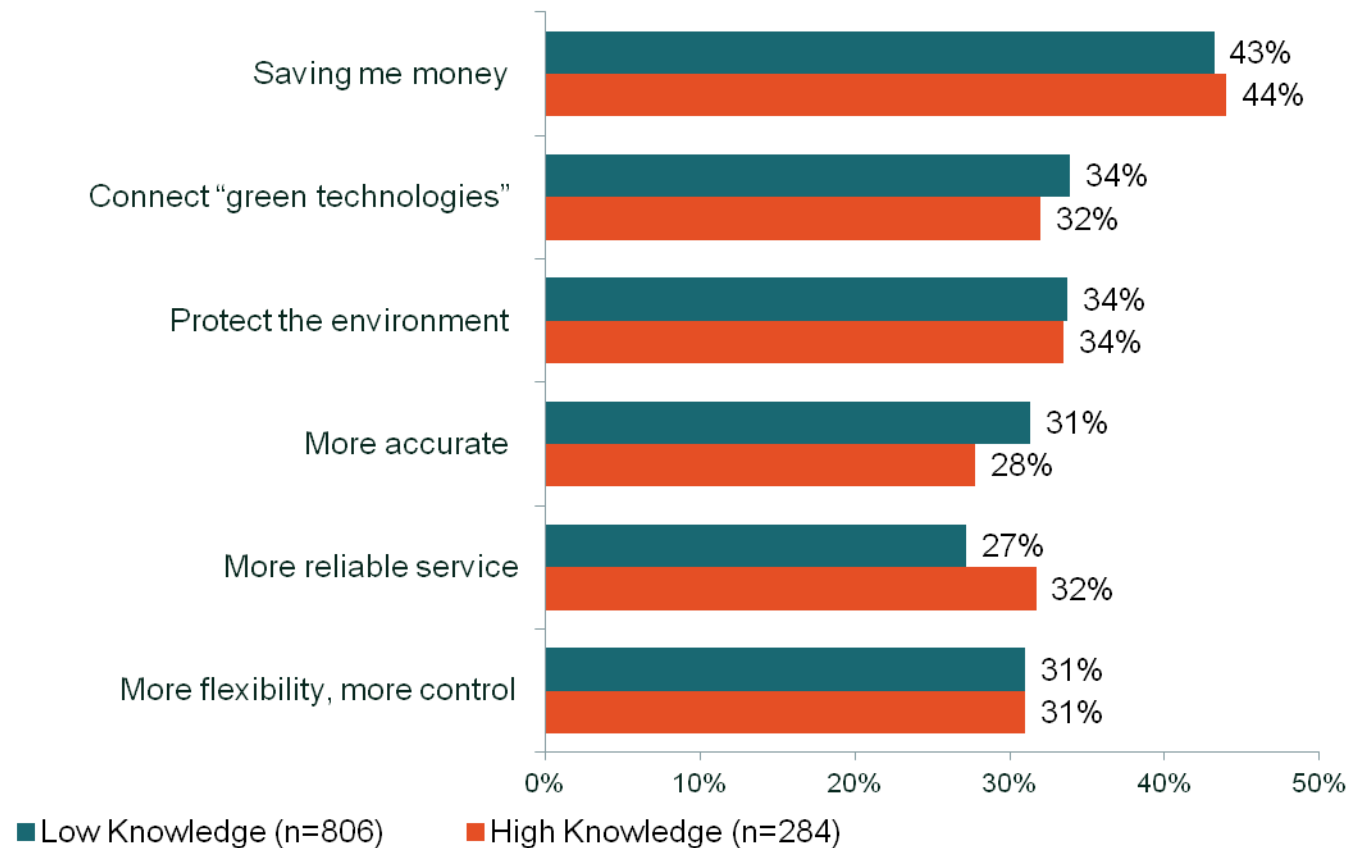


(n=1168)

SM7-12. Regardless of whether or not you agree or disagree with the following statements, please rank order them in terms of the statement that would be MOST important to you personally, to the statement that is least important to you personally.

Knowledge level makes little difference in evaluations of Smart Meter attribute importance.

Reasons to implement Smart Meter **Ranked First or Second** in importance by Knowledge Level



SM7-12. Regardless of whether or not you agree or disagree with the following statements, please rank order them in terms of the statement that would be MOST important to you personally, to the statement that is least important to you personally.

QSG5. Which of the following statements comes closest to describing your current knowledge about Smart Meters?

Importance of attributes varies by demographics:

- More women than men cite the importance of green technologies.
- A higher proportion of high education customers cite the importance of green technologies.
- A higher proportion of African Americans than whites cite the importance of billing accuracy.

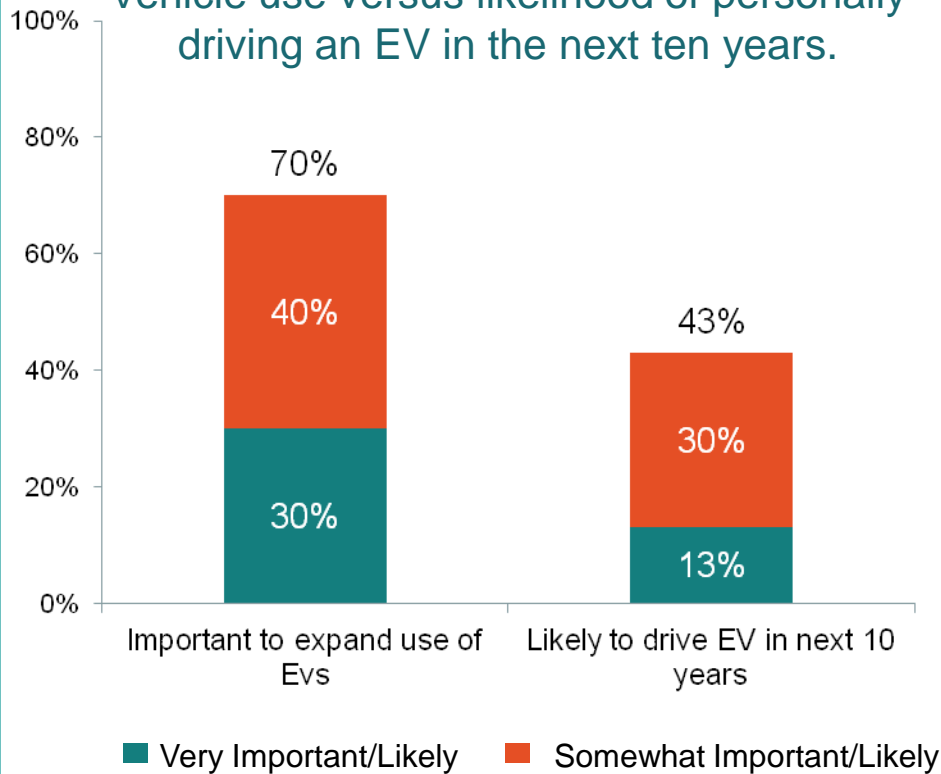
Part 5

Electric Vehicles



Seven-in-ten say it is important to expand the use of Electric Vehicles, but only 13% say they are “very likely” to be driving an EV within the next 10 years.

Perceived importance of expanding Electric Vehicle use versus likelihood of personally driving an EV in the next ten years.



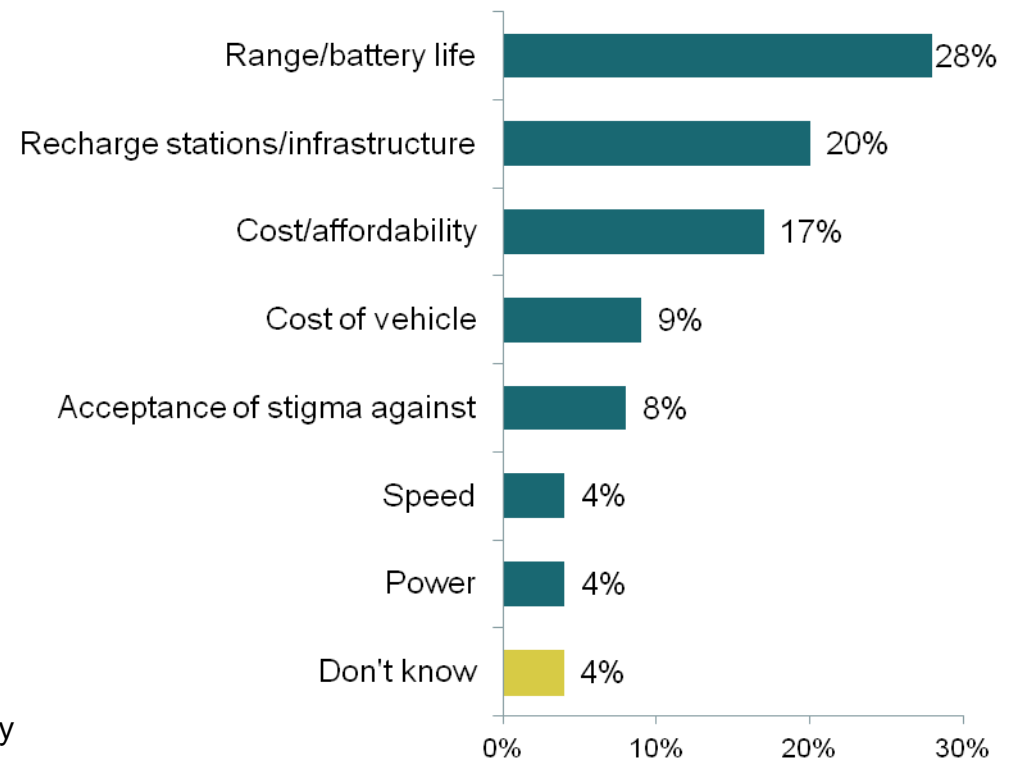
(n=1168)

QE1. How important is it to expand the use of electric vehicles as a way to reduce our dependence on oil?

QE6. How likely is it that you personally will be driving an electric vehicle within the next ten years?

QE7. What is the greatest hurdle or road block electric vehicles need to overcome to be successful in the US market?

Greatest hurdle or roadblock for Electric Vehicles to be successful



Most customers agree that utilities should be facilitating the shift to electric vehicles, though fewer are confident their utility has the ability to do this.

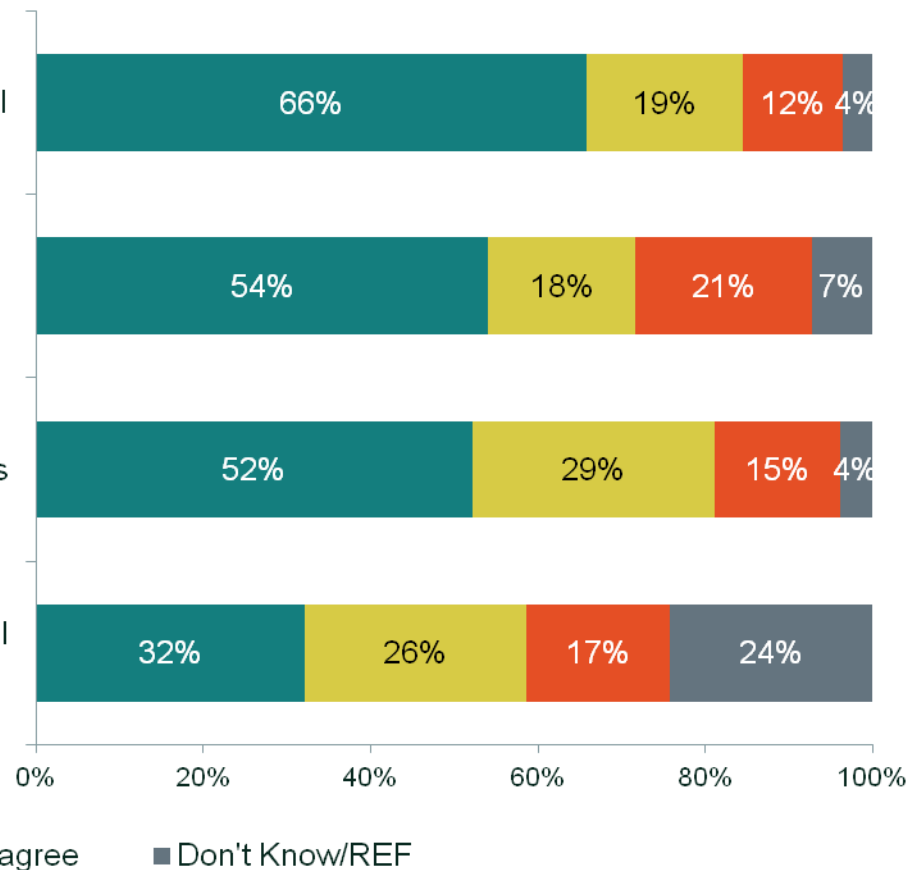
Agree or Disagree **Electric Vehicles** Statements

I support the idea that my electric utility should begin working and investing now to assure that the needed infrastructure will be in place for convenient recharging of electric vehicles

I believe plug-in electric vehicles will be well accepted in the US marketplace – 15-20 years from now, they will account for at least 20 percent of the new cars and trucks sold.

I would like to see my electric utility take a leadership role in encouraging a shift toward electric vehicles as manufacturers introduce them.

My electric utility has the technical ability to facilitate a gradual shift to electric vehicles.



(n=1168)

QEV3-5A. For each statement, please indicate whether you agree or disagree.

Part 6
E2 Segmentation

Market Strategies E2 (Energy + Environment) Segmentation

E2 Segmentation Hypotheses:

There are several well-defined segments within the US population on E2 issues.

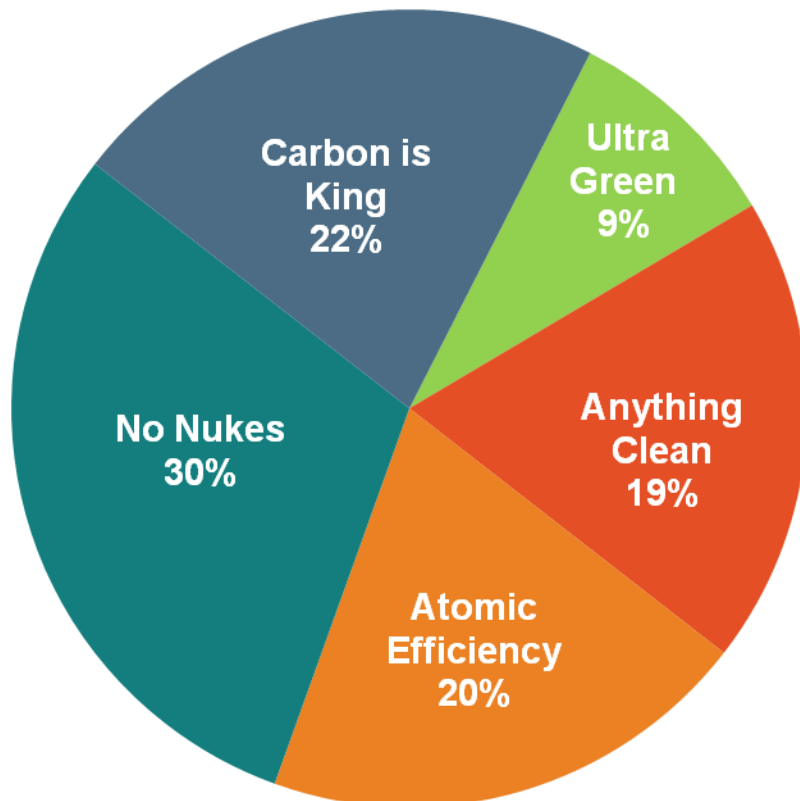
Each segment has a consistent set of attitudes, beliefs and preferences that cut across the range of E2 issues and are distinctive and different from the other segments.

The proportion of people in each segment varies by region, service territory, age group, ethnicity, etc.

By understanding the E2 segments, their size, makeup and views, energy companies will be able do a more effective job communicating with their target audiences and building coalitions for rational E2 policies.

E2 Segments

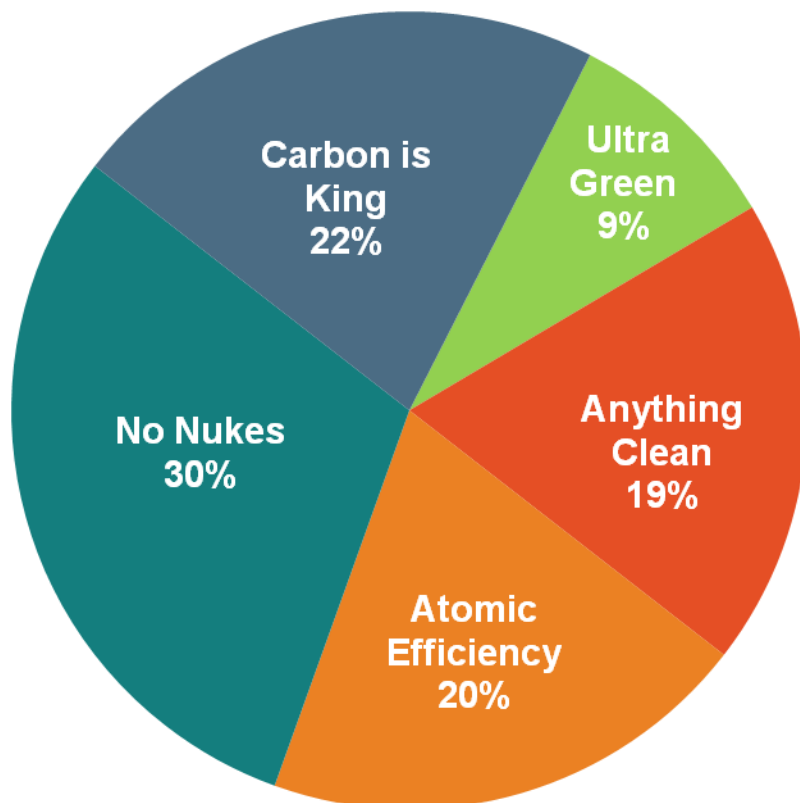
Five Points of View on E2 Issues



- **Analysis of E2 data has identified five segments**
- **Segment definitions and relative sizes have remained stable across three waves of E2 research**
- **The segments have consistent patterns of belief that cut across the range of E2 issues**
 - Energy industry and trends
 - Environmental views
 - Global warming
 - Smart Grid/Meters
 - Future energy sources

E2 Segments

Two “Extreme” Viewpoints



➤ Carbon is King

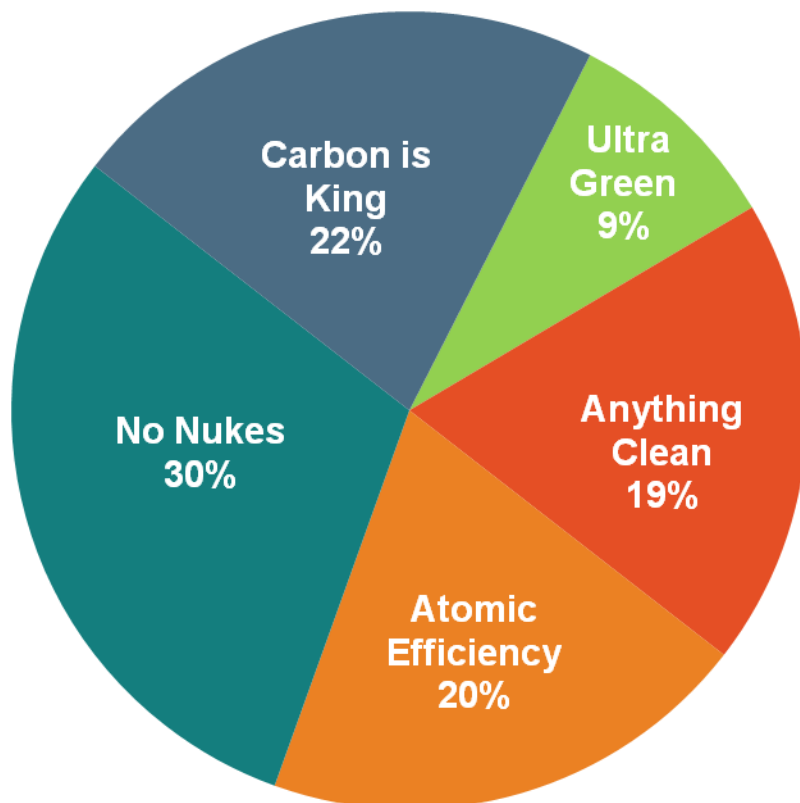
- 22% nationally
- Pro industry
- Favor continued use of fossil fuels

➤ Ultra Green

- 9% nationally
- Anti industry
- Strong belief in global warming
- Favor total reliance on renewables and efficiency, mixed opinions on nuclear
- Reject clean coal

E2 Segments

Three “Centrist” Groups



All three are more moderate, but views are closer to Ultra Green than to Carbon is King

➤ **Anything Clean**

- 19% nationally
- Strongly favor renewables and EE
- Reject coal, but like clean coal
- Favor expansion of nuclear

➤ **Atomic Efficiency**

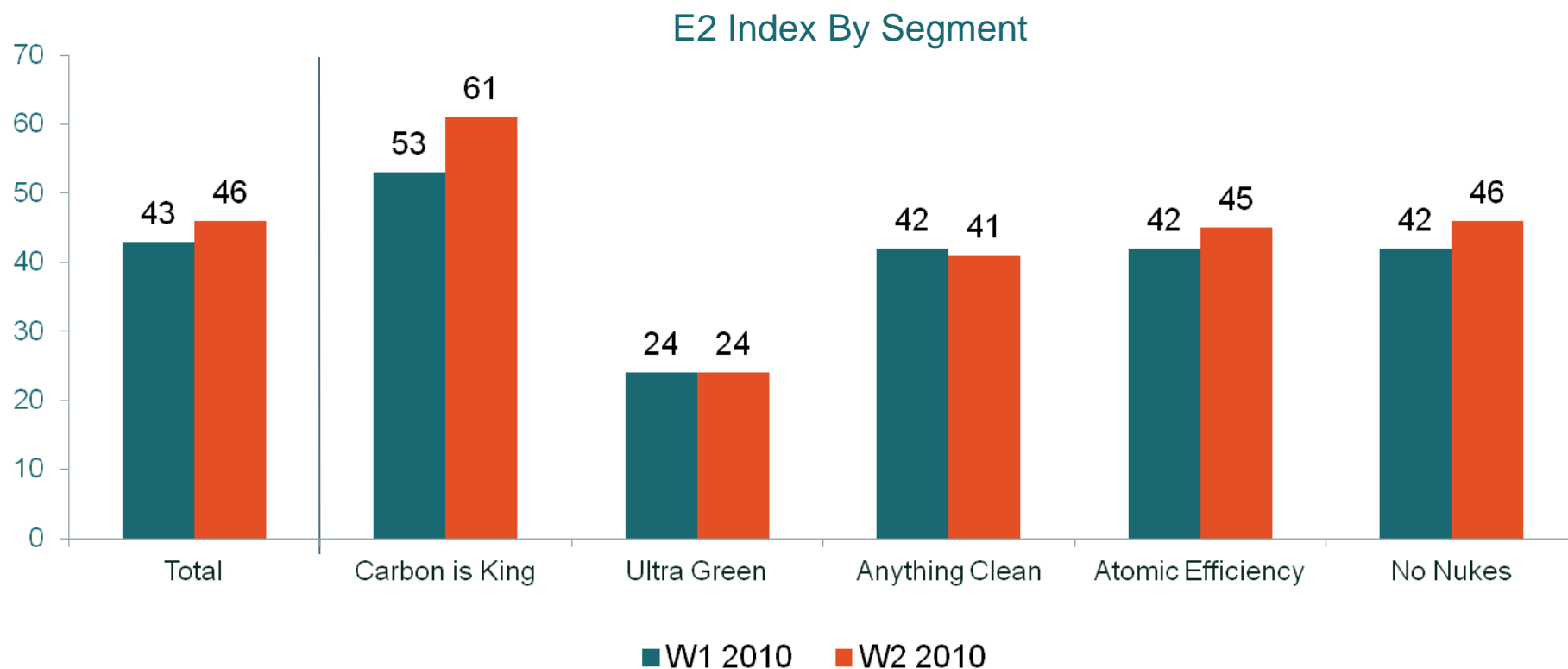
- 20% nationally
- Strongly favor renewables and EE
- Strongest support for nuclear

➤ **No Nukes**

- 30% nationally
- Strongly favor renewables, less so EE
- Favor clean coal, but not nuclear

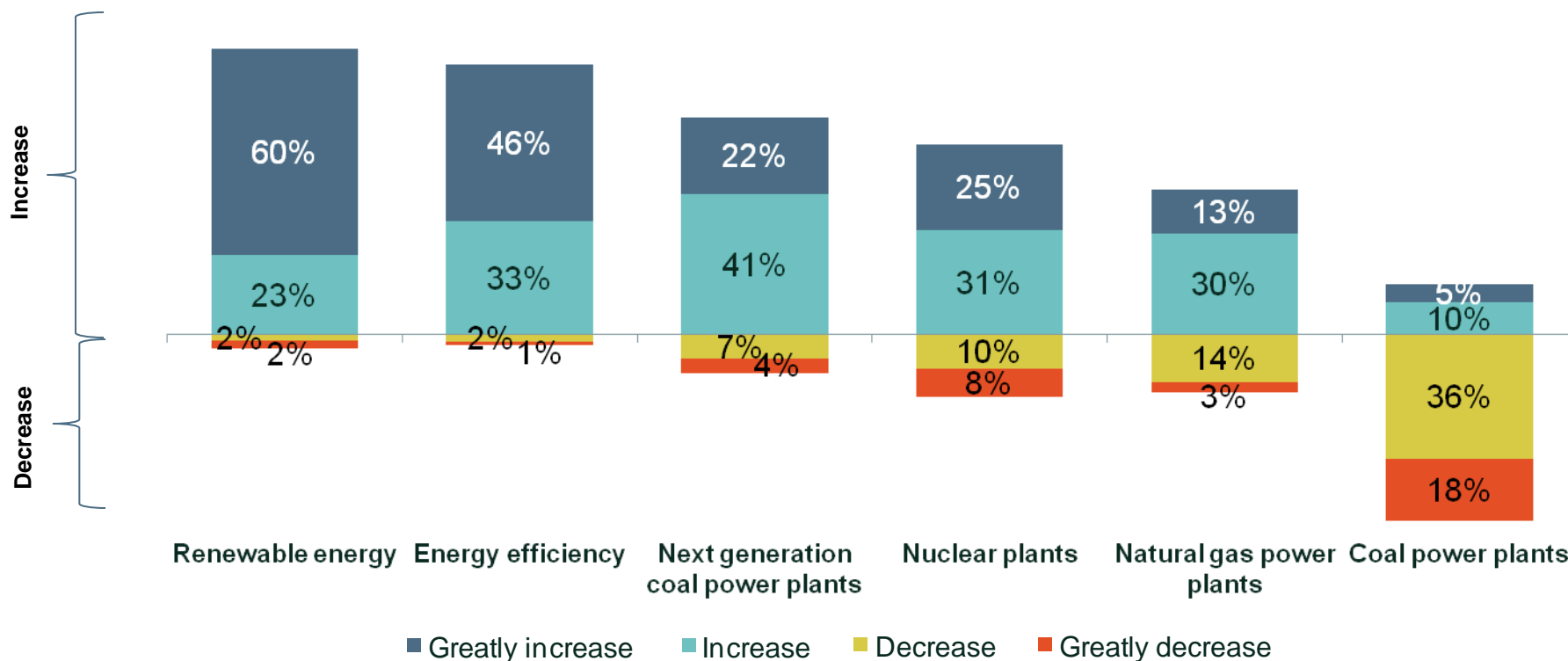
E2 Segments

The recent, post-oil-spill uptick in the E2 Index is confined to three segments, with the largest increase seen in the Carbon is King segment.



In general, Renewable and Energy Efficiency measures continue to be the public's focus of where energy investments for the future should be made. Clean coal is seeing increased support.

Should the U.S. increase, decrease, or maintain its use of the following energy sources in order to meet energy demand over the next several decades?

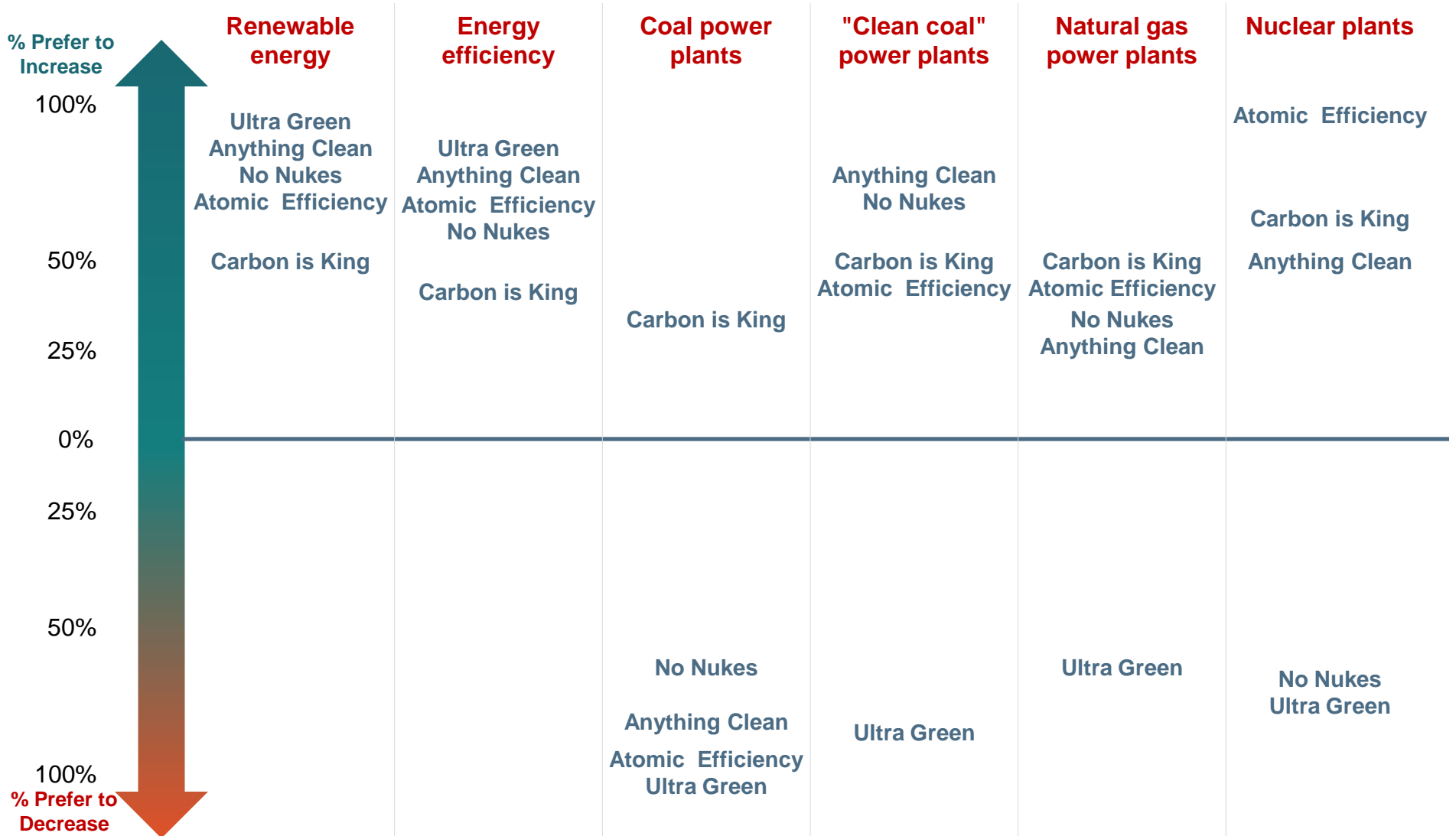


(n=1168)

Q14A-F. For each of the following energy sources, please indicate whether you feel the US should increase, decrease, or maintain its use to meet energy demand over the next several decades.

E2 Segments

Future generation resource preferences vary meaningfully by segment

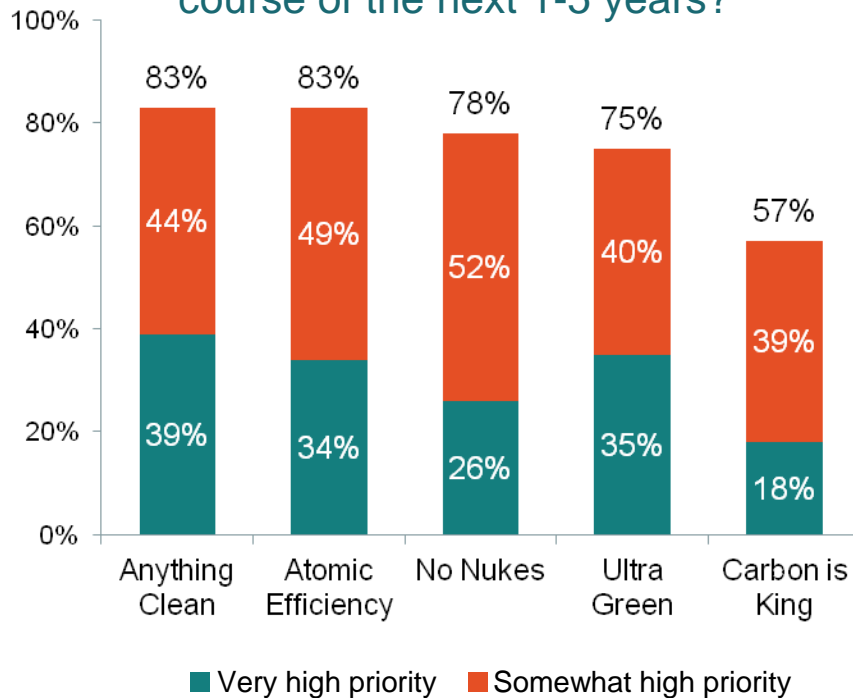




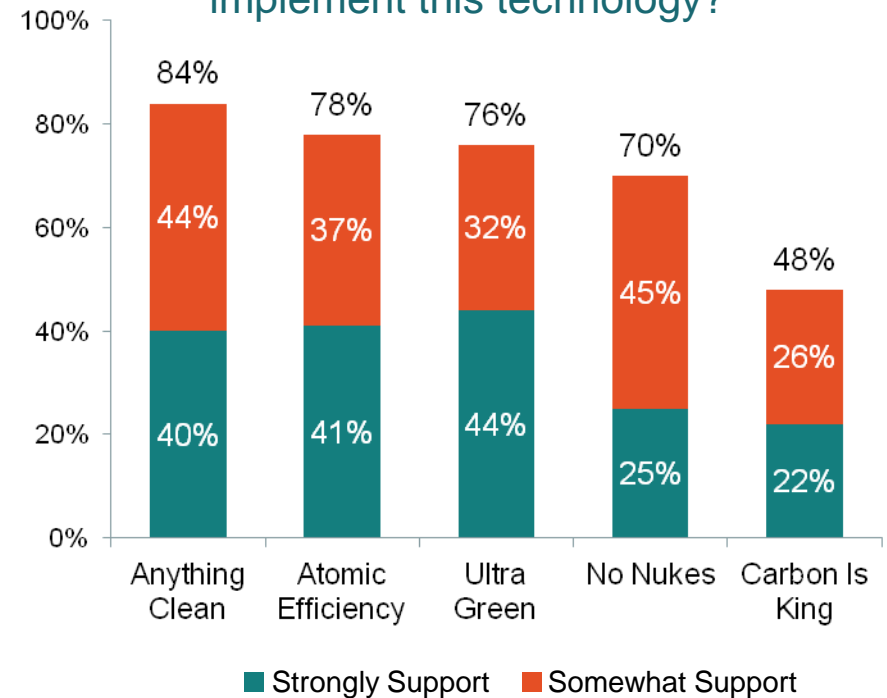
E2 Segments

Smart Grid and Smart Meter support is strong, except in the Carbon is King segment.

How high a priority is implementing Smart Grid/Smart Meter technology over the course of the next 1-5 years?



Do you support the idea that your electric utility should start now and work quickly to implement this technology?



QSG7. Based on the information provided, how high a priority do you think it should be for local, state, and Federal governments, along with electricity providers, to begin implementing Smart Grid/Smart Meter technology over the next one to five years?

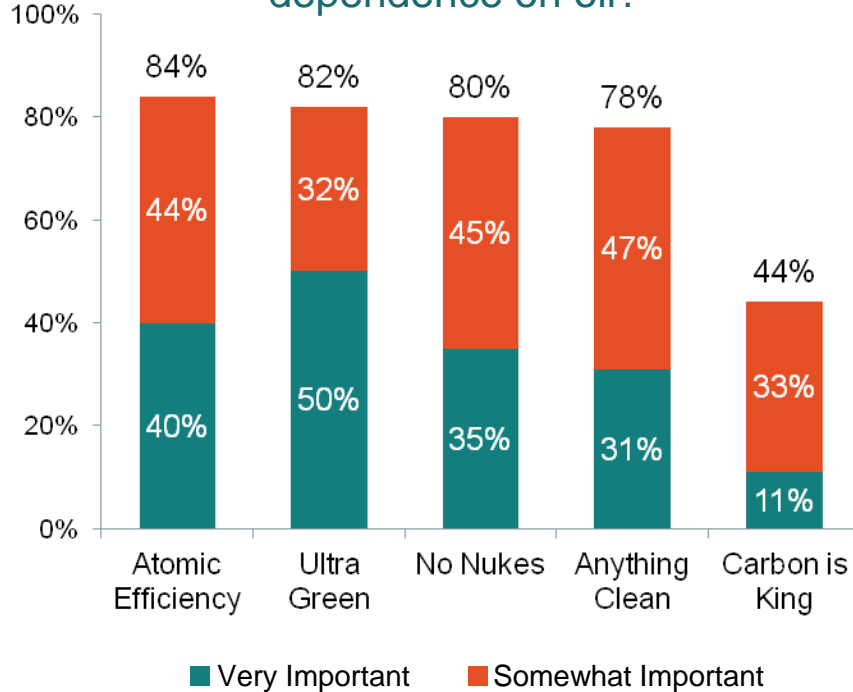
QSG7A. Please indicate whether you support the idea that your electric utility should start now and work quickly to begin implementing Smart Grid and Smart Meter technology.



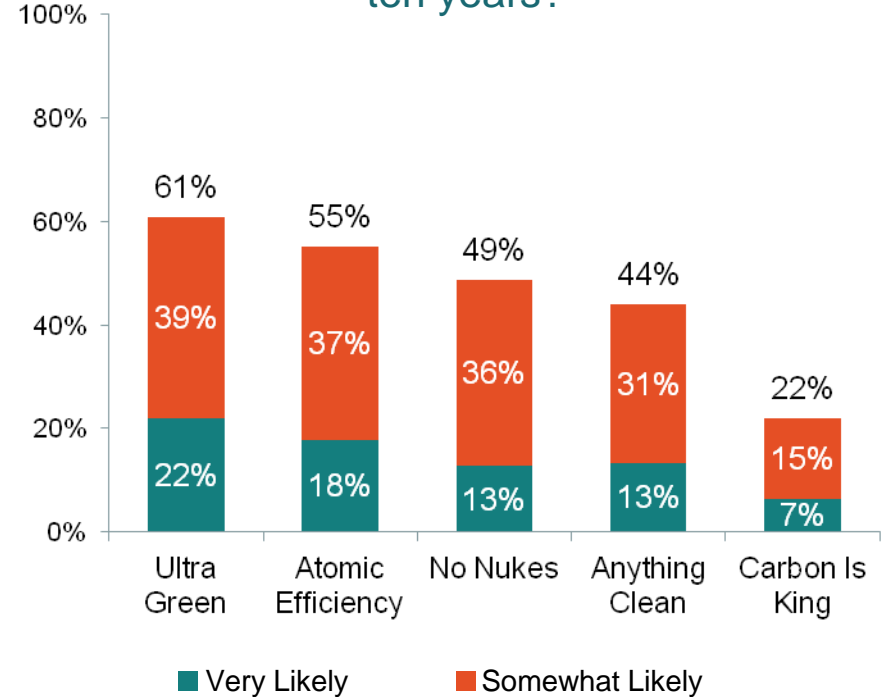
E2 Segments

The Carbon is King segment does not favor EVs. Majorities of Ultra Green and Atomic Efficiency customers think they may be likely to be driving one in the near future.

How important is it to expand the use of electric vehicles as a way to reduce our dependence on oil?



How likely is it that you personally will be driving an electric vehicle within the next ten years?



QEV1. How important is it to expand the use of electric vehicles as a way to reduce our dependence on oil?
 QEV6. How likely is it that you personally will be driving an electric vehicle within the next ten years?

Market Strategies E2 (Energy + Environment) Segmentation

Strategic Questions:

How do the E2 segments break out in our region or service territory?

Which segments strongly support / strongly oppose the things our company wants to do?

What arguments/messages can unite strong supporters and moderate potential supporters to build a winning coalition?

Realistically, what initiatives are likely to fail/are not worth the effort given the attitudinal landscape we face?

For more on the E2 Segments, see the current issue of EEI's *Electric Perspectives*.

Part 7
E2 Implications

E2 Research so far: a few key takeaways

- **Public perceptions of the energy industry are not static.**
 - Opinions respond over time as events unfold and more education takes place.
 - Opinions shift with political, economic and environmental developments.
 - Long-term strategy can influence these ebbs and flows, but sometimes has to ride them out.

- **The public is looking for leadership on E2 issues.**
 - Many are willing to credit energy utilities.
 - Open to a range of energy supply options.
 - Not well-informed, yet favorable to new “smart” technologies.
 - Optimistic and supportive on electric vehicles.
 - The industry has yet to stake its claim as the go-to information resource.

- **“Smart” technologies are under the radar.**
 - The industry is still largely talking to itself about Smart Grid/Meters - overcautiously?
 - It is essential to bring the public into this conversation more fully to begin capturing the full benefit of these technologies.

E2 Research so far: a few key takeaways

- **Customers are open to more active engagement.**
 - Receptive to the idea that they can become better energy managers and help address the energy challenges of the future.
 - Smart technologies and EVs offer new and exciting ways to engage with customers.
 - Companies that exhibit vision and leadership can leverage these positive feelings to enhance corporate images, strengthen customer relationships, and help achieve key business objectives.

- **Segmentation can sharpen understanding and enhance public communication and policy strategies.**

E2 Research Program

For further information, please contact:

Jack Lloyd

Vice President

Market Strategies International

Direct - 630.467.1071

jack.lloyd@marketstrategies.com

www.marketstrategies.com