

Influences, Perceptions, Knowledge, and Expectations of the New Energy Consumer

New views from the 2011 IBM Global Utility Consumer Survey



Agenda

- *The 2011 IBM Global Utility Consumer Survey*
- A look back at the past few years
- Summary findings
- Conclusions



In our first two Global Utility Consumer Surveys (2007 and 2009), we assessed the future wants and needs of residential customers

- The context for the questions in the prior surveys was that of a dramatically different future for energy consumers
 - Better information
 - More control
 - Better reliability and power quality
 - More participation
 - Greener
- Since early 2009, many other surveys have come out with a similar focus on what consumers will look for in the future
- The consensus among these has been that many consumers are eager for the enhanced reliability, control, and new programs and services that these changes will bring



But in some parts of the world, issues have emerged in the present that compete with those expectations

The collage consists of several overlapping elements:

- ABC News article:** "Smart meters could be abandoned". Updated Tue Jan 4, 2011 8:37am AEDT. The roll-out of smart meters in Victoria could be suspended, after the State Government ordered a review of the project.
- Smart Meter Backlash, Again: This Time in Texas** by Katie Fehrenbacher | Mar. 10, 2011.
- duurzaamnieuws** (23-10-2010): "Slimmere slimme meter nodig". Het huidige energienetwerk in Nederland is nog toekomst. Nederlandse netbeheerders zijn nog om het energieverbruik goed in kaart te brengen lastig. Het gehele energienetwerk zal het spilling te voorkomen. De keuzes...
- CBC news Canada**: "End smart meter hydro program: Ont.". Last Updated: Wednesday, September 15, 2010. The Canadian Press.
- SmartMeters**: "Class action lawsuit filed over SmartMeters". By Sabrina Rodriguez, Eyewitness News. Story Created: Nov 6, 2009 at 5:16 PM PST.
- THE SUNDAY TIMES**: "Security fears threaten smart meter". January 14, 2010. Angela Jameson, Industrial Correspondent. The £8.1 billion rollout of smart meters in Britain could be knocked off course unless the Government and Ofgem, the energy regulator, act urgently to convince the public that the information provided by the meters will be securely.
- Facebook** search results for "no smart meters". It shows several groups and pages, including "Say No to 'Smart Meters'", "Say No To Smart Meters in Ontario!", and "QLD say NO to smart meters".

Examples have been consumer confusion and uncertainty, negative press, and valid yet troubling questions about privacy, cost, and distribution of benefits



In our third survey, we reset our focus to the most current attitudes, opinions, and needs that are driving such future expectations

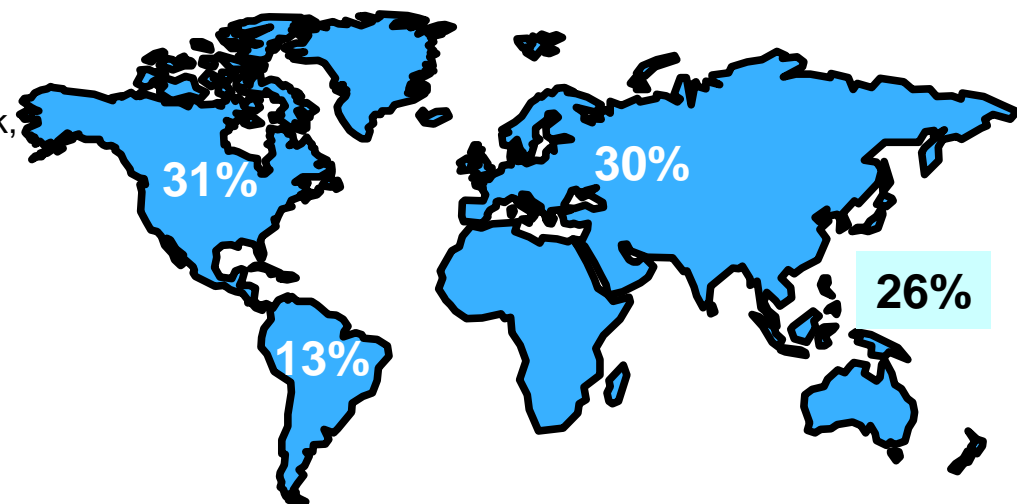
Survey respondents

Nearly 10,000 responses from households in **seventeen countries** – eight in Europe (Germany, Netherlands, UK, Ireland, Denmark, France, Belgium, Poland), five in Asia-Pac (Japan, Australia, New Zealand, China, and India), two in North America (United States, Canada), and two in South America (Brazil, Chile).

Questionnaire structure

30-35 multi-part questions in nine languages covering a wide variety of topics including attitudes towards smart grid perceptions and understanding, interest in green power, and energy costs. Certain questions – including a targeted set about data privacy - were only asked in one or more specific countries.

The survey was conducted during September 2010 - February, 2011. The surveys conducted during the summer of 2007 and late 2008 to early 2009 are used for comparison where possible.



The population of the countries represented in this year's survey is over half the total global population.



Our objectives for the 2011 survey can be summarized in four lines of inquiry about energy consumers today



What are their most important **influences** on knowledge gained, opinions, and attitudes toward behavioral change?

How do **perceptions** of providers and technological change shape consumers' expectations?

What levels of **knowledge** do they have on critical elements that drive their perceptions and expectations?

What **expectations** do consumers have for energy service and providers in the future – and what sets these expectations?

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In our prior papers, we outlined the bases on which consumers worldwide are reevaluating their interactions with energy providers

- Significant segments of consumers are willing to assume new roles and take on new responsibilities
- Their motivating factors differ, but most strike at common outcomes
 - Climate change concerns
 - Desires to conserve energy and natural resources
 - Volatile (and often high) energy prices
 - Growing awareness of technological advancement
 - Global financial crises of 2007-present
- Many of their influences are from outside the energy sphere
 - Entertainment (TV and internet)
 - Telecommunications
 - Media

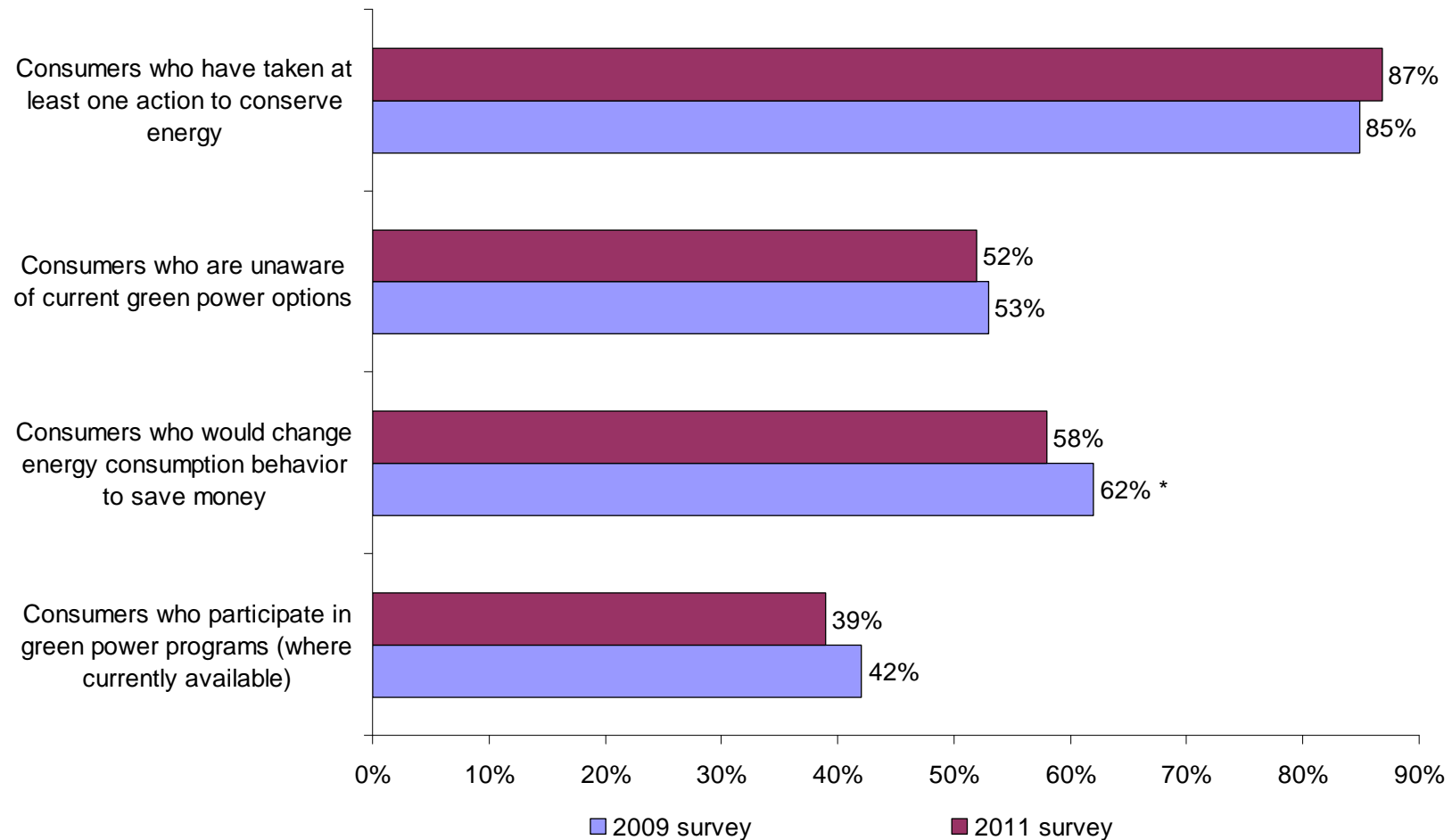


But recently, several new elements have come into play which may be further shifting the dynamics locally and globally

- The fallout of the global financial crisis and political instabilities in key energy supply regions are elevating public economic worries
 - The international “contagion” dynamic of the economic crisis and decreasing certainty in the future of energy supply regions is bringing the goal of national economic self-sufficiency to the forefront
 - Energy prices are returning to pre-crisis levels (or surpassing them), reinforcing the impact of energy on household spending
- Catastrophic natural disasters have highlighted the fragility of the current energy infrastructure while reinforcing our dependence on it
- With major privacy breaches growing in frequency and scope, the questions of “who has access to my personal data and how safe is it” have made a major move into the mainstream consciousness



In comparison with our 2009 survey, much of the consumer landscape has remained remarkably stable



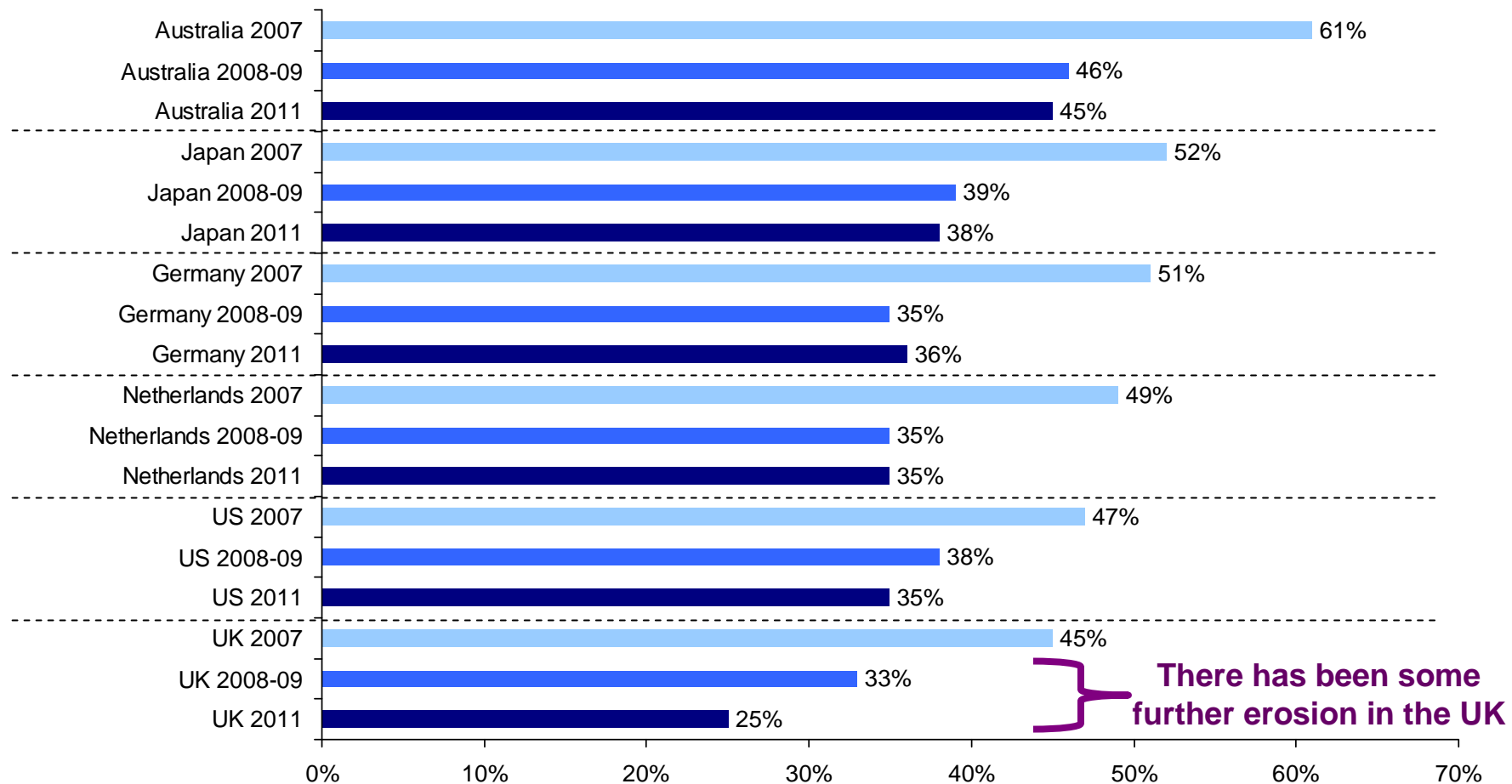
* Question was asked for two different levels of savings in 2009, percentage shown is weighted average.

Sources: IBM Global Utility Consumer Surveys, 2009 and 2011



After a sharp drop in the wake of the global economic crisis, non-energy “green products” spending has stabilized in most countries

Percent of respondents that pay more for non-energy related environmentally friendly products
(original 2007 group of six countries)



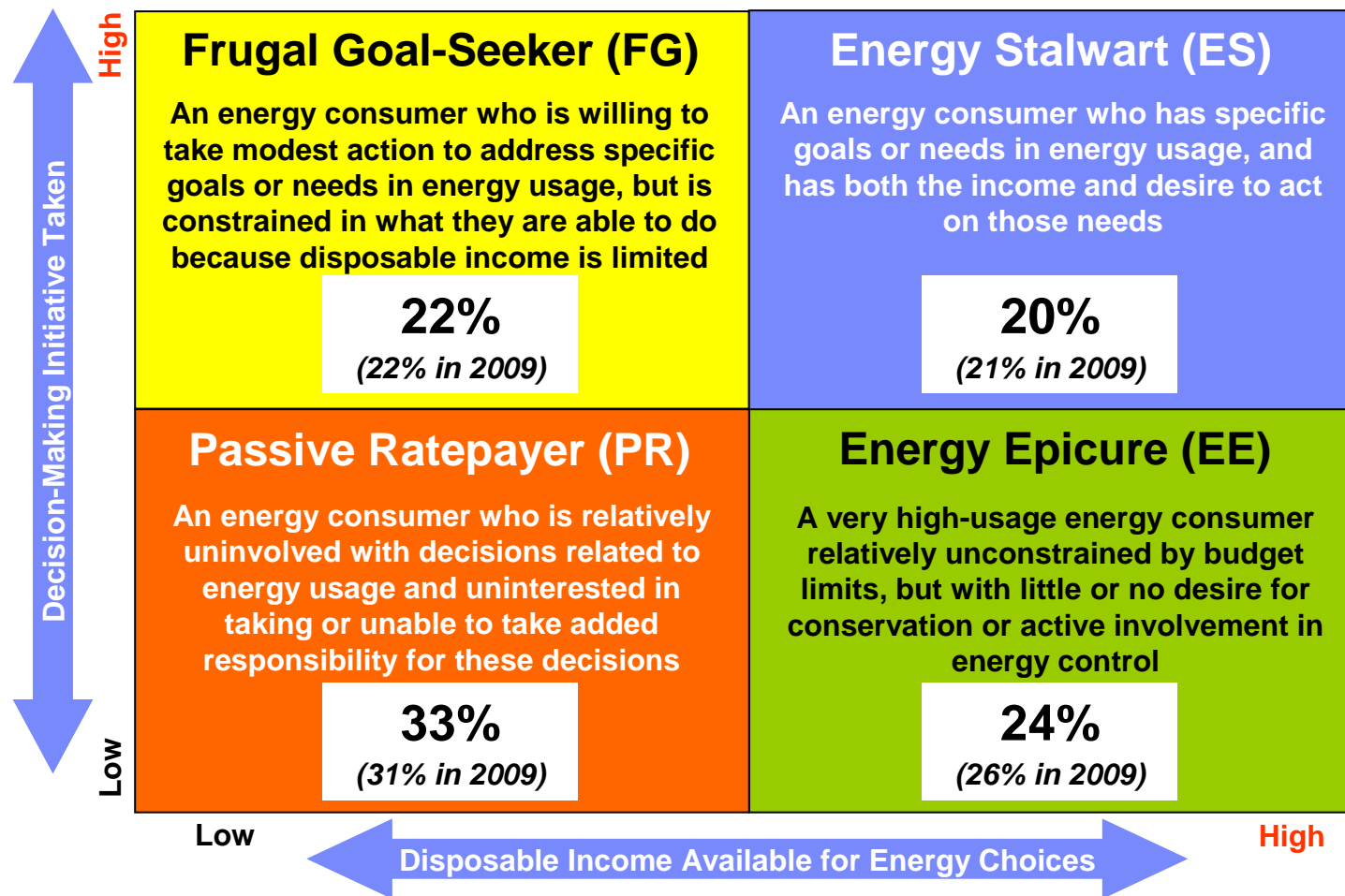
Sample Size = 4430 (2011), 3497 (2009), 1893 (2007); population-weighted.

Sources: IBM Global Utility Consumer Surveys, 2007-2011



Over 40% of consumers remain ready to engage or actively engaging with providers – but one-third will stick with the status quo

Residential and Small Commercial Energy Customers - 2011



Two factors will determine the nature of the interface between utilities and consumers in the future:

1. The degree to which consumers **take initiative in decision-making** in their energy supply and usage toward meeting specific goals
2. The consumers' **disposable income available for energy choices** in supply and conservation

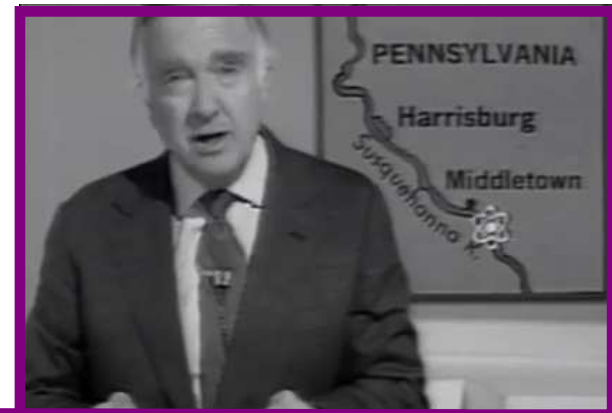
Sources: Valocchi, M, A. Schurr, J. Juliano, and E. Nelson, Plugging in the consumer: Innovating utility business models for the future, IBM Institute for Business Value, 2007; IBM Global Utility Consumer Surveys 2009, 2011.

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What are the primary

influences

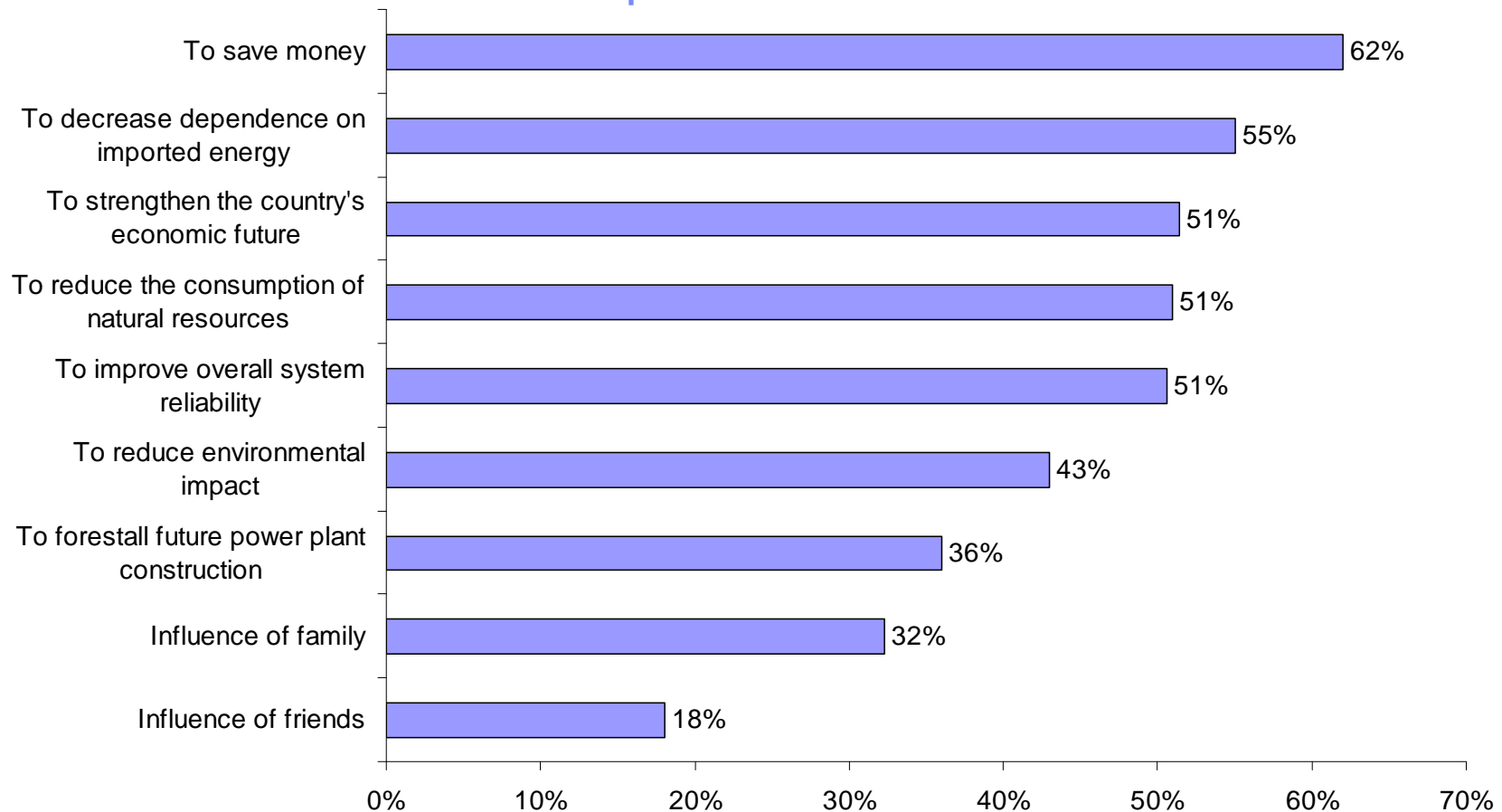


on knowledge, opinions, and
attitudes regarding changes
in energy technology and
consumption behavior?



As with the previous two surveys, cost is the most significant change influencer overall – but other factors are growing in importance

Percent of respondents that would be likely to change their energy usage patterns based on specific influences



Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



The highest and lowest ranked influences are common across Europe, but there is a lot of variation between the endpoints

	UK	IRL	FRA	BEL	NL	GER	DEN	POL
Saving money	1	3	1	1	1	1	1	1
Conserving natural resources	2	6	5	3	5	5	4	2
Lessening environmental impact	3	1	2	5	3	2	3	4
Improving the national economy	4	2	6	3	2	7	7	6
Achieving energy independence for nation	5	4	2	2	5	4	2	5
Improving reliability for self, neighbors	6	4	4	6	3	3	5	3
Avoiding/deferring new plant construction	7	7	7	7	7	6	6	7
Family doing it	8	8	8	8	8	8	8	8
Friends doing it	9	9	9	9	9	9	9	9

 Countries that ranked this influence highest among EU countries

 Countries that ranked this influence lowest among EU countries

Note: Highlighting shown above only done when three or fewer countries have the same rank .



There is a lot of similarity across North America and Australia, but the ranking of influences varies widely elsewhere (especially China)

	US	CAN	AUS	NZ	JPN	CHN	IND	BRZ	CHL
Saving money	1	1	1	1	1	7	5	4	2
Achieving energy independence for nation	2	6	4	5	3	1	1	1	5
Improving reliability for self, neighbors	3	3	3	6	7	4	4	6	6
Conserving natural resources	4	4	2	2	5	2	3	2	1
Improving the national economy	5	5	5	2	2	3	2	5	4
Lessening environmental impact	6	2	6	2	4	6	6	3	3
Avoiding/deferring new plant construction	7	7	7	7	8	9	7	7	7
Family doing it	8	8	8	8	6	5	8	8	8
Friends doing it	9	9	9	9	9	8	9	9	9

Countries that ranked this influence highest among countries outside EU

Countries that ranked this influence lowest among countries outside EU

Note: Highlighting shown above only done when three or fewer countries have the same rank .

Sample Size = 5653.



However, the overall ranking of influences is different for the more active consumers than for the more passive ones

	Passive Ratepayers	Energy Epicures	Frugal Goal-seekers	Energy Stalwarts
Saving money	1	1	4	2
Achieving energy independence	2	2	2	3
Improving the nation's economy	3	3	5	5
Improving reliability for self, neighbors	4	4	6	6
Conserving natural resources	5	5	1	1
Family is changing behavior	6	6	8	8
Lessening impact on the environment	7	7	3	4
Avoiding/deferring new plant construction	8	8	7	7
Friends are changing behavior	9	9	9	9

The relative strength with which issues related to national economic health (highlighted in the red box above) was surprising, particularly when compared to environmental concerns. They are paramount for PRs and EEs, and play a strong role in the concerns of the other two profile groups as well.

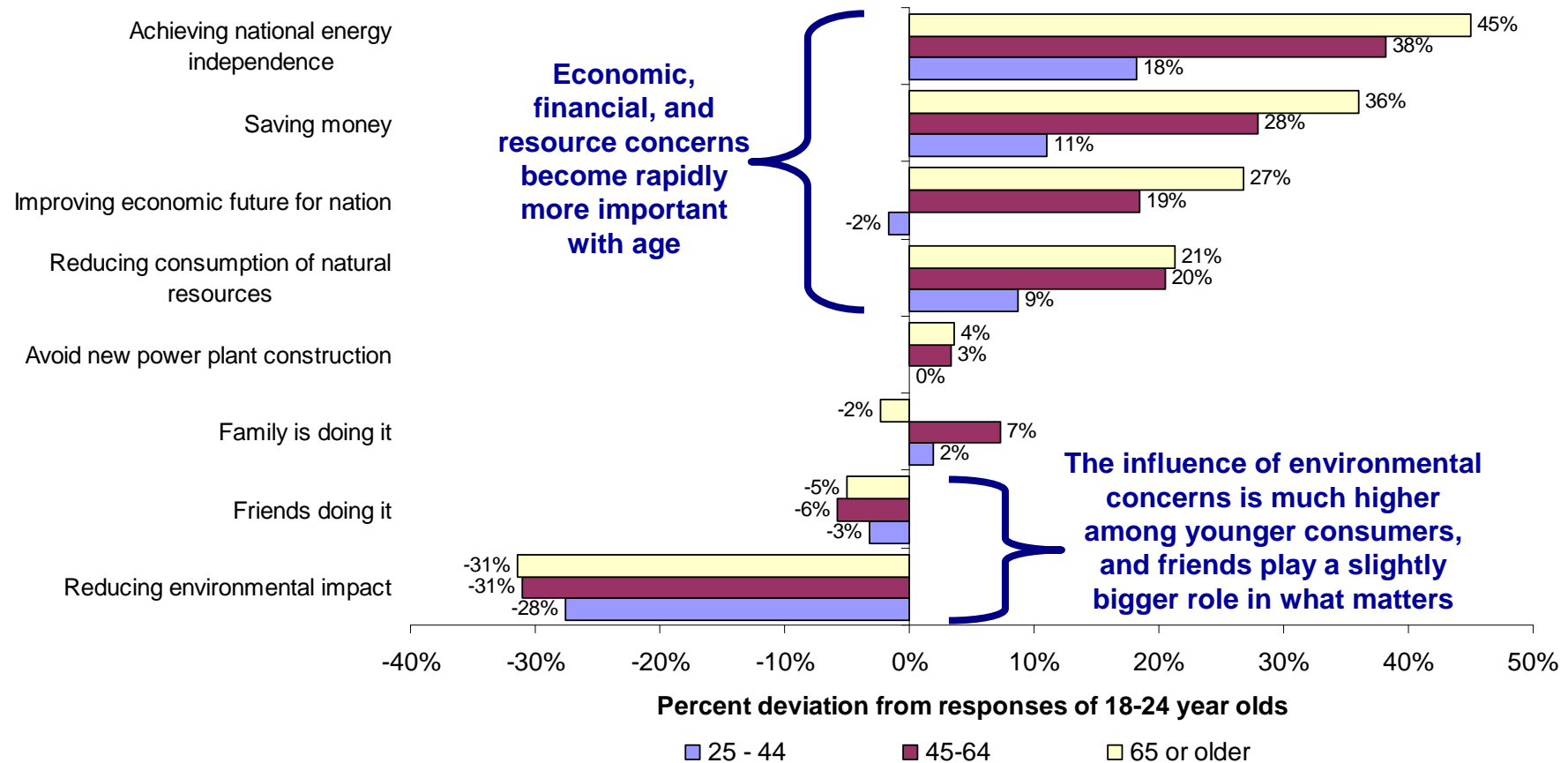
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



The degree of impact of each influence differs by varying degrees across age groups as viewed as well

Differences in likelihood of changing energy usage patterns based on specific influences, compared to that for the 18-24 year old age group



Sample Size = 6045 (Group I and Group II only); population-weighted.

Source: IBM 2011 Global Utility Consumer Survey

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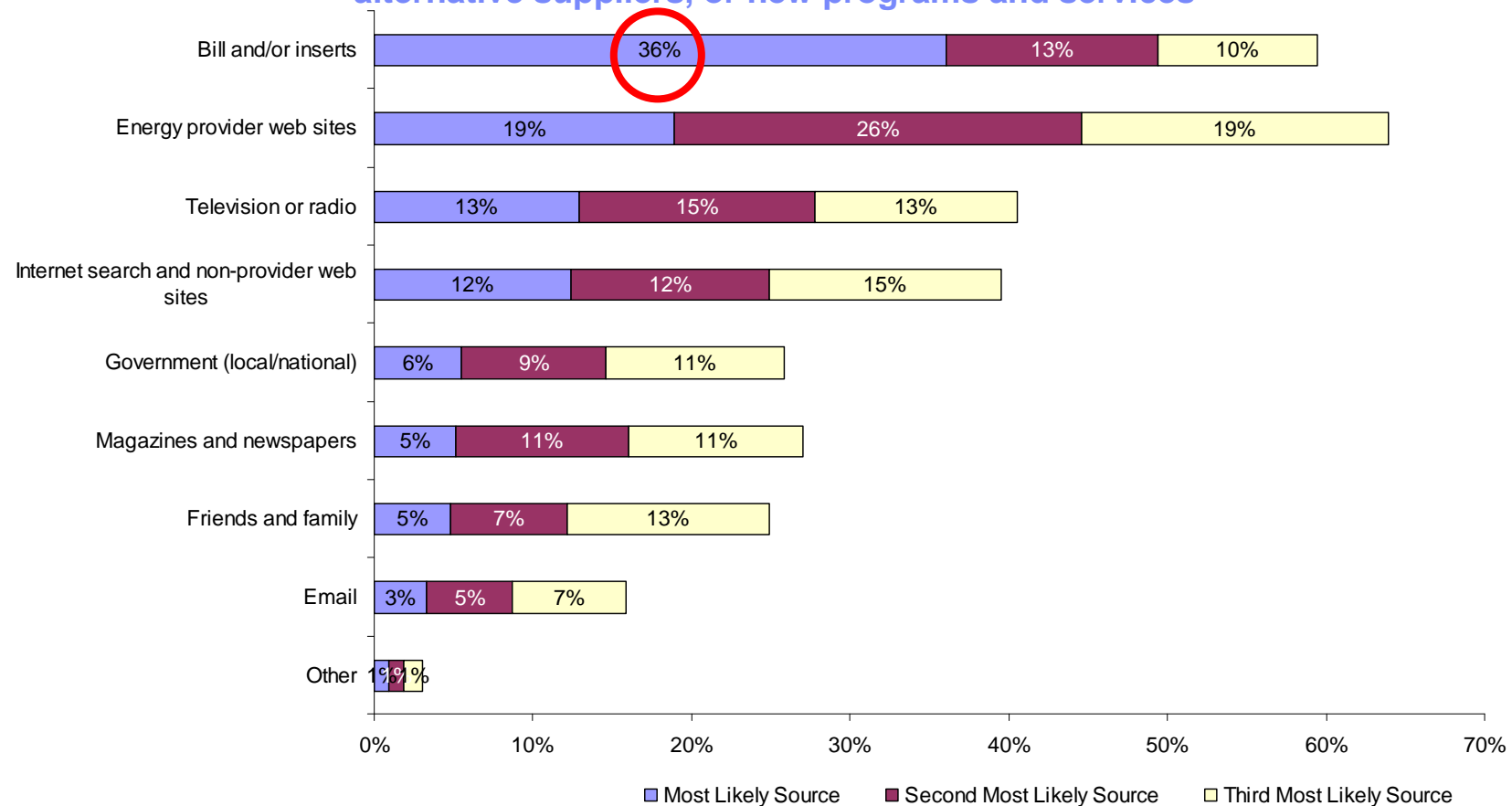
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For these reasons, understanding how consumers typically learn about new energy topics, products, and services is critical

Percent of respondents that listed a particular information source as the one(s) to which they are most likely to go to get information about energy cost, environmental impact, alternative suppliers, or new programs and services



Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



For Groups I and II, the relative rankings of the sources remained consistent across age groups, but a few notable exceptions emerge

- The **major exceptions were government information sources** (ranked fifth among those 35 or older, eighth among those 25-34, and last among those aged 18-24) **and friends and family** (fifth among those 18-34, seventh among those 35-54, and ninth among those 55 and over)
- Those under 25 were three times more likely to rely on friends and family as their first source for this information than government sources; for those 55 and over, they were only half as likely
- **On-line social networking** was twice as likely to be a primary source of information for those 18-24 than for those 25-34, and six times more likely than for those 35 and older
- **On-line video content** was five times as likely to be a primary source of information for those 18-24 than for those 25-34, and nine times more likely than for those 35 and older

Source: IBM 2011 Global Utility Consumer Survey



While many characteristics did not vary much by country or geographic region, a few local observations did stand out

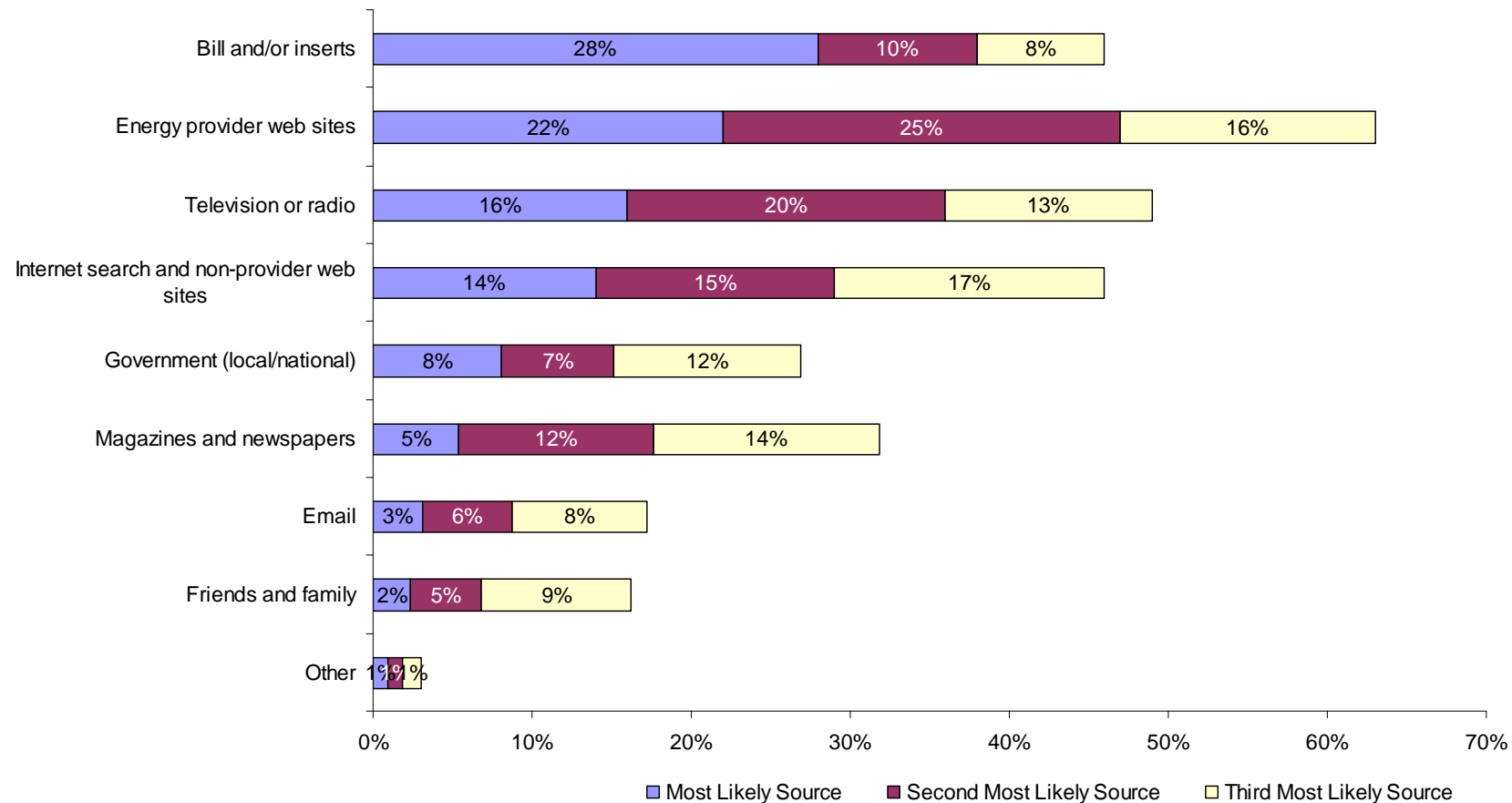
- In North America, Japan, and Europe, the **energy bill and inserts** were the most frequently cited first resource for information – but provider web sites were the preferred source nearly as often in Europe as a whole (vs. one-third to one-half as often elsewhere)
- In three countries – the UK, the Netherlands, and Germany – the percentage relying first on **provider web sites** exceeded the fraction preferring information by mail
- The most frequently cited first resource in Japan was **television and radio**, selected four times as often as in the other regions

Source: IBM 2011 Global Utility Consumer Survey



In the Group III nations, direct mail information from providers plays a lesser role; traditional media are stronger sources of information

Percent of respondents that listed a particular information source as the one(s) to which they are most likely to go to get information about energy cost, environmental impact, alternative suppliers, or new programs and services



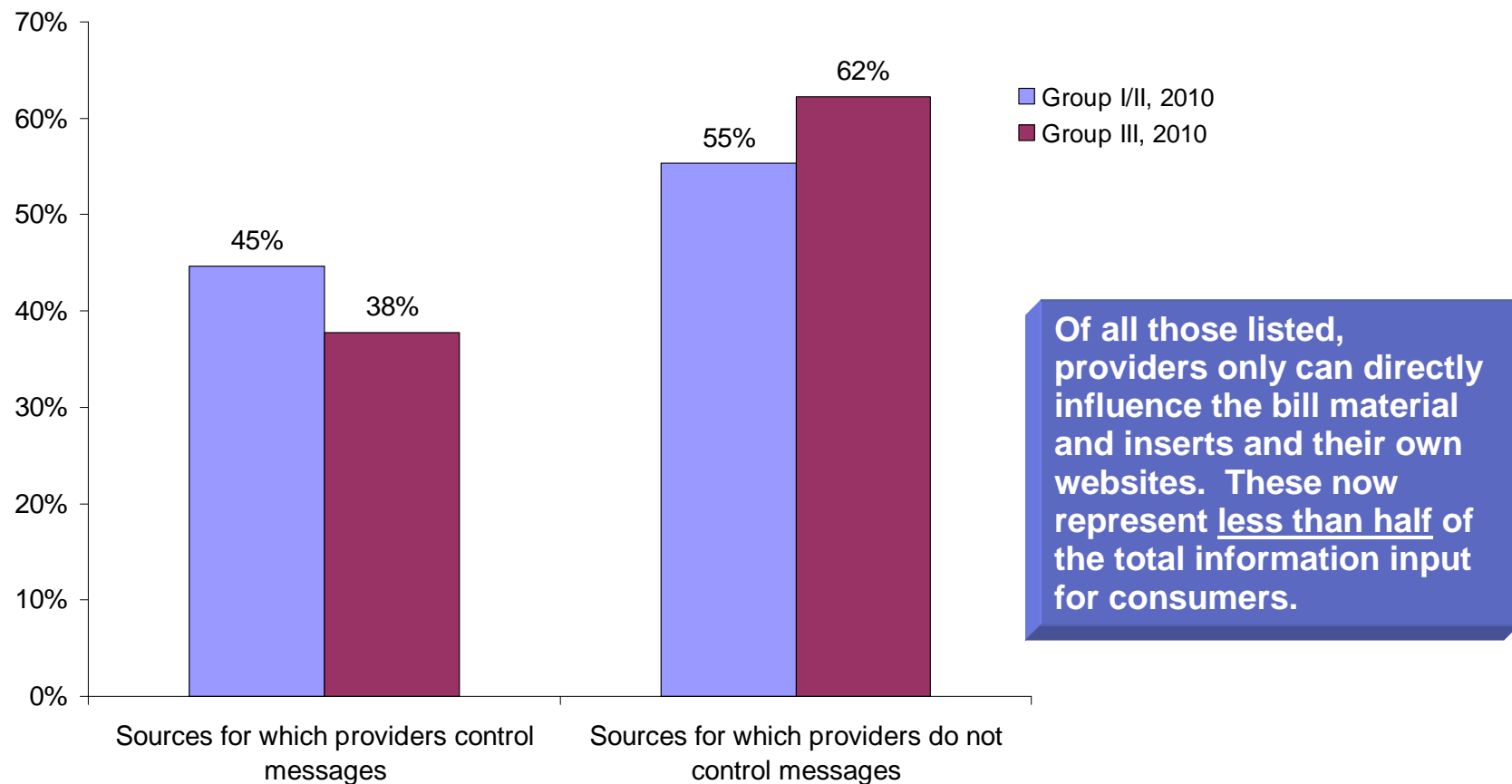
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 2073 (Group III only).



Note that in aggregate, however, providers' influence on messaging for their own customers is now outweighed by other sources

Percent of respondents that listed a particular information source as the one(s) to which they are most likely to go to get information about energy cost, environmental impact, alternative suppliers, or new programs and services (grouped)



Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.

What do consumer

perceptions



of energy and utilities companies
tell us about their confidence that
these organizations can meet their
needs now and in the future?



What's important to consumers is very similar across North America, Europe, ANZ, and Japan

Ranking of seven key priorities for providers from the consumers' perspective

Global	North America	Japan	Aus-NZ	Europe
Provides energy to me reliably	Provides energy to me reliably	Provides energy to me reliably	Provides energy to me reliably	<i>Provides energy to me reliably</i>
Restores service quickly after outages	Restores service quickly after outages	Restores service quickly after outages	<i>Helps me manage my energy usage and reduce my overall bill</i>	<i>Treats me as a valued customer</i>
Works to supply cleaner energy	<i>Works to supply cleaner energy</i>	Works to supply cleaner energy	<i>Restores service quickly after outages</i>	<i>Restores service quickly after outages</i>
<i>Helps me manage my energy usage and reduce my overall bill</i>	<i>Treats me as a valued customer</i>	Invests in advanced technologies	Works to supply cleaner energy	<i>Works to supply cleaner energy</i>
<i>Treats me as a valued customer</i>	<i>Helps me manage my energy usage and reduce my overall bill</i>	<i>Helps me manage my energy usage and reduce my overall bill</i>	<i>Treats me as a valued customer</i>	<i>Helps me manage my energy usage and reduce my overall bill</i>
Invests in advanced technologies	Invests in advanced technologies	Rapidly adopts new technologies and ways of doing business	Invests in advanced technologies	Invests in advanced technologies
Rapidly adopts new technologies and ways of doing business	Rapidly adopts new technologies and ways of doing business		Rapidly adopts new technologies and ways of doing business	Rapidly adopts new technologies and ways of doing business

Notes: **Groups shown in italic text within delineated boxes are not different to a statistically significant degree.**
The "valued consumer" question was not included for Japan and France.

Sample Size = 6196 (all countries in four regions shown); population-weighted.

Source: IBM 2011 Global Utility Consumer Survey



Outside of those regions, priorities are quite a bit more divergent

Ranking of seven key priorities for providers from the consumers' perspective

ROW*	China	Chile	Brazil	India
Provides energy to me reliably	Provides energy to me reliably	Works to supply cleaner energy	Works to supply cleaner energy	Works to supply cleaner energy
Restores service quickly after outages	Works to supply cleaner energy	Provides energy to me reliably	Invests in advanced technologies	Helps me manage my energy usage and reduce my overall bill
Works to supply cleaner energy	Treats me as a valued customer	Helps me manage my energy usage and reduce my overall bill	Provides energy to me reliably	Treats me as a valued customer
Helps me manage my energy usage and reduce my overall bill	Restores service quickly after outages	Invests in advanced technologies	Restores service quickly after outages	<i>Invests in advanced technologies</i>
Treats me as a valued customer	Helps me manage my energy usage and reduce my overall bill	Restores service quickly after outages	Helps me manage my energy usage and reduce my overall bill	<i>Provides energy to me reliably</i>
Invests in advanced technologies	Invests in advanced technologies	Treats me as a valued customer	Treats me as a valued customer	Restores service quickly after outages
Rapidly adopts new technologies and ways of doing business	Rapidly adopts new technologies and ways of doing business	Rapidly adopts new technologies and ways of doing business	Rapidly adopts new technologies and ways of doing business	Rapidly adopts new technologies and ways of doing business

Notes: * ROW is all countries in North America, Europe, ANZ, and Japan, n = 6196.

Groups shown in italic text within delineated boxes are not different to a statistically significant degree.

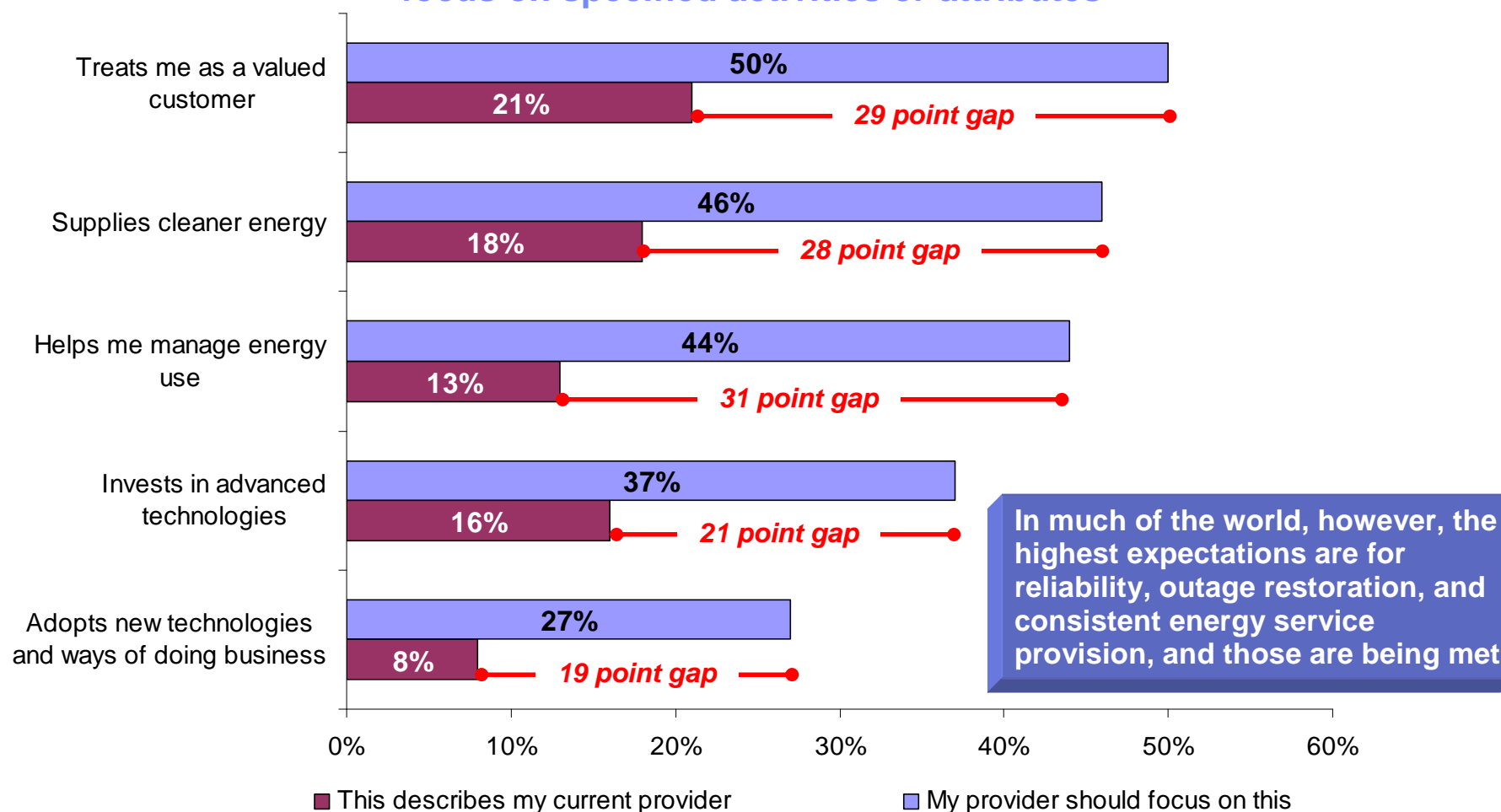
Sample Size = 8118.

Source: IBM 2011 Global Utility Consumer Survey



In some of these priority areas, consumers perceive a shortfall of provider attention to their needs

Percent of respondents who believe that their current provider does/should focus on specified activities or attributes



Sample Size = 6045 (Group I and Group II only); population-weighted.

Source: IBM 2011 Global Utility Consumer Survey

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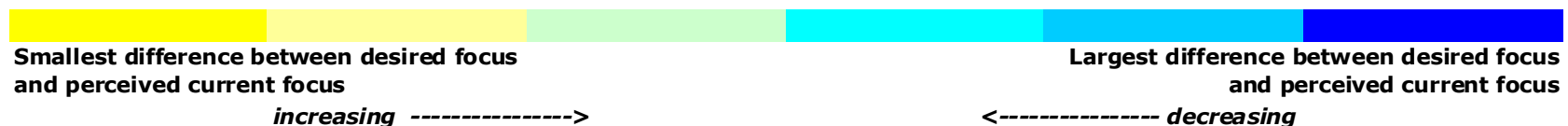
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In the Netherlands and Japan, customers service expectations and the perceived focus providers give them most closely match

	Supplies cleaner energy	Invests in new technologies	Adopts new ways of doing business	Helps me manage energy use	Values me as a customer
Netherlands					
Japan					
Chile					
Poland					
Germany					
Belgium					
France					
Brazil					
Denmark					
UK					
Canada					
Ireland					
India					
US					
China					
New Zealand					
Australia					

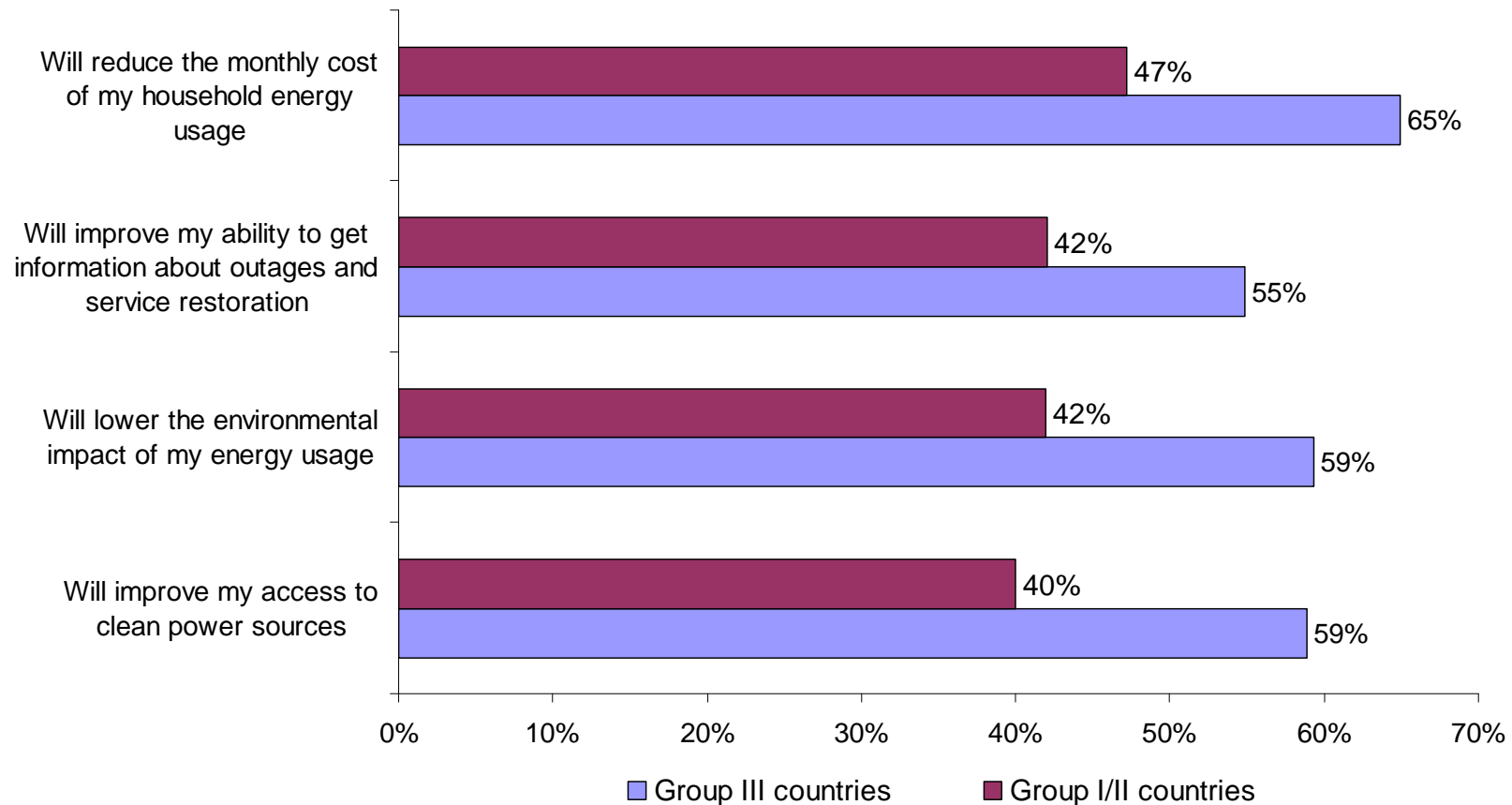


Consumers in China, New Zealand, and Australia in fact have very positive opinions about their providers – but they are the most demanding customers worldwide as well. That is the main reason that they have the biggest gaps between the perception of what their focus areas currently are and what they should be.



The perceptions of what new energy technologies will bring them are positive in many ways...

Percent of respondents that believe smart grid and smart meter deployment will have specific benefits



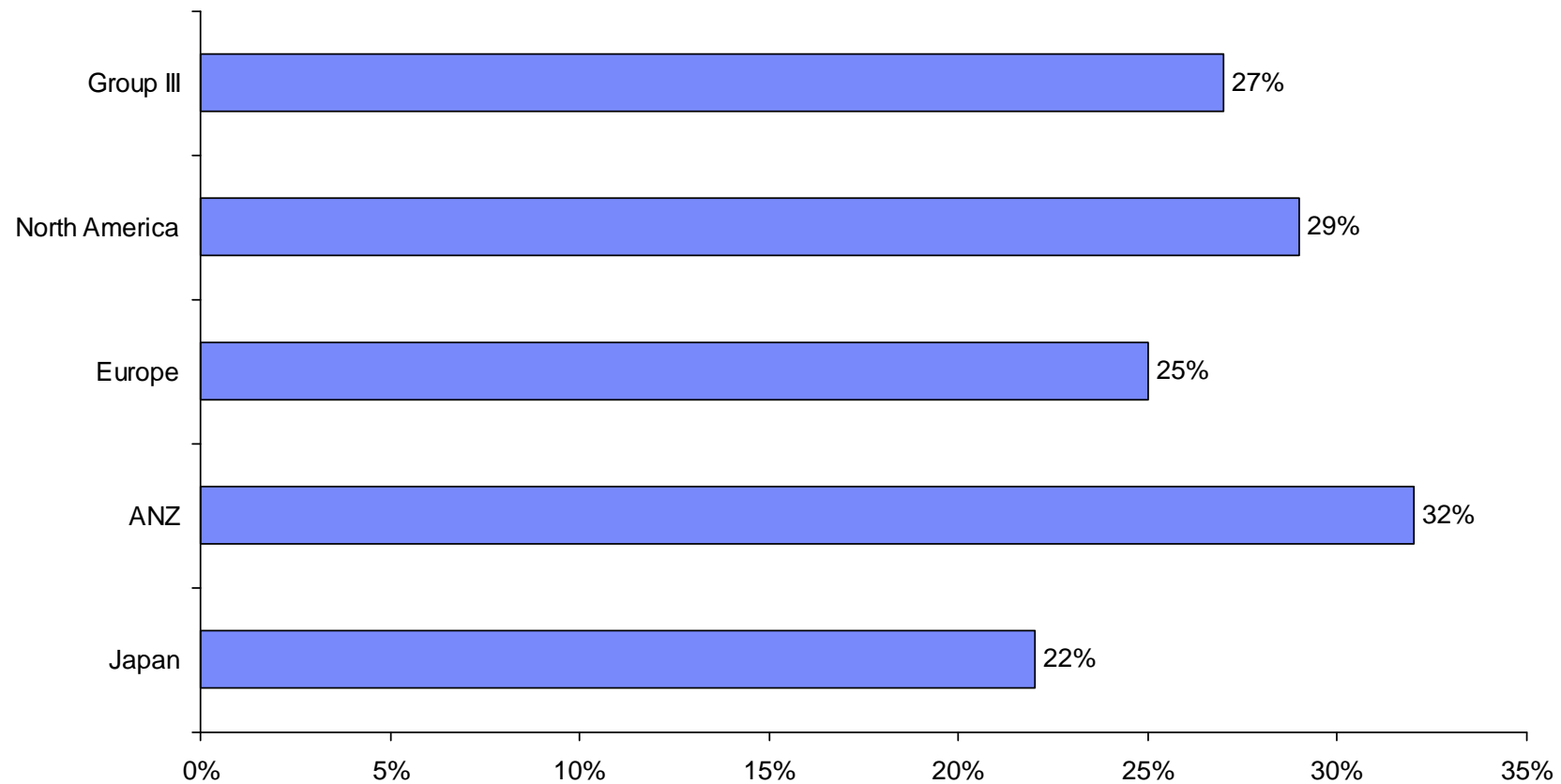
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 8118; GI/GII population-weighted.



...but for about a quarter of respondents, a key concern relates to privacy impacts smart grid and smart meter programs will have

Percent who believe that smart grid and smart meter technologies pose a risk to privacy



Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 8118.



Recent items in the news have put a spotlight on these concerns



Canada's highest court OKs power-use data in pot conviction

The privacy rights of a Canadian citizen were not violated when his utility supplied power-use information leading to his conviction for marijuana growing, Canada's highest court ruled Wednesday. The divided opinion in that ruling could fuel fears among consumers and advocates who worry that smart meters can track power use minute by minute, allowing inferences about consumers' personal lives based on how much power they use and when.

Four justices wrote the majority opinion, with three more concurring in the result and two dissenting. The ruling overturned an appeals-court decision, restoring an earlier conviction. With the permission of an unnamed utility, Calgary police installed a digital recording ammeter (DRA) on the house of a Calgary resident suspected of growing marijuana

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Police seek utility data for homes of marijuana-growing suspects

Monday, February 28, 2011 02:54 AM

BY DEAN NARCISO

THE COLUMBUS DISPATCH

At least 60 subpoenas are filed each month across the state seeking customers' energy-use records from utilities.

The goal: to root out indoor marijuana-growing operations.

Most of the subpoenas are filed in central Ohio because of the region's high population density and number of customers, said the spokeswoman.

The utility, while sensitive to its customers' expectation of privacy, is compelled by law to provide information about electricity use. "We're obligated when we get these requests. There's not an option to say no."

Police detectives staking out two homes since last year recently requested "billing detail for these addresses, including the subscriber information ... to better identify the participants in this illegal activity," according to a letter accompanying the subpoena. The cases are still open, according to police.

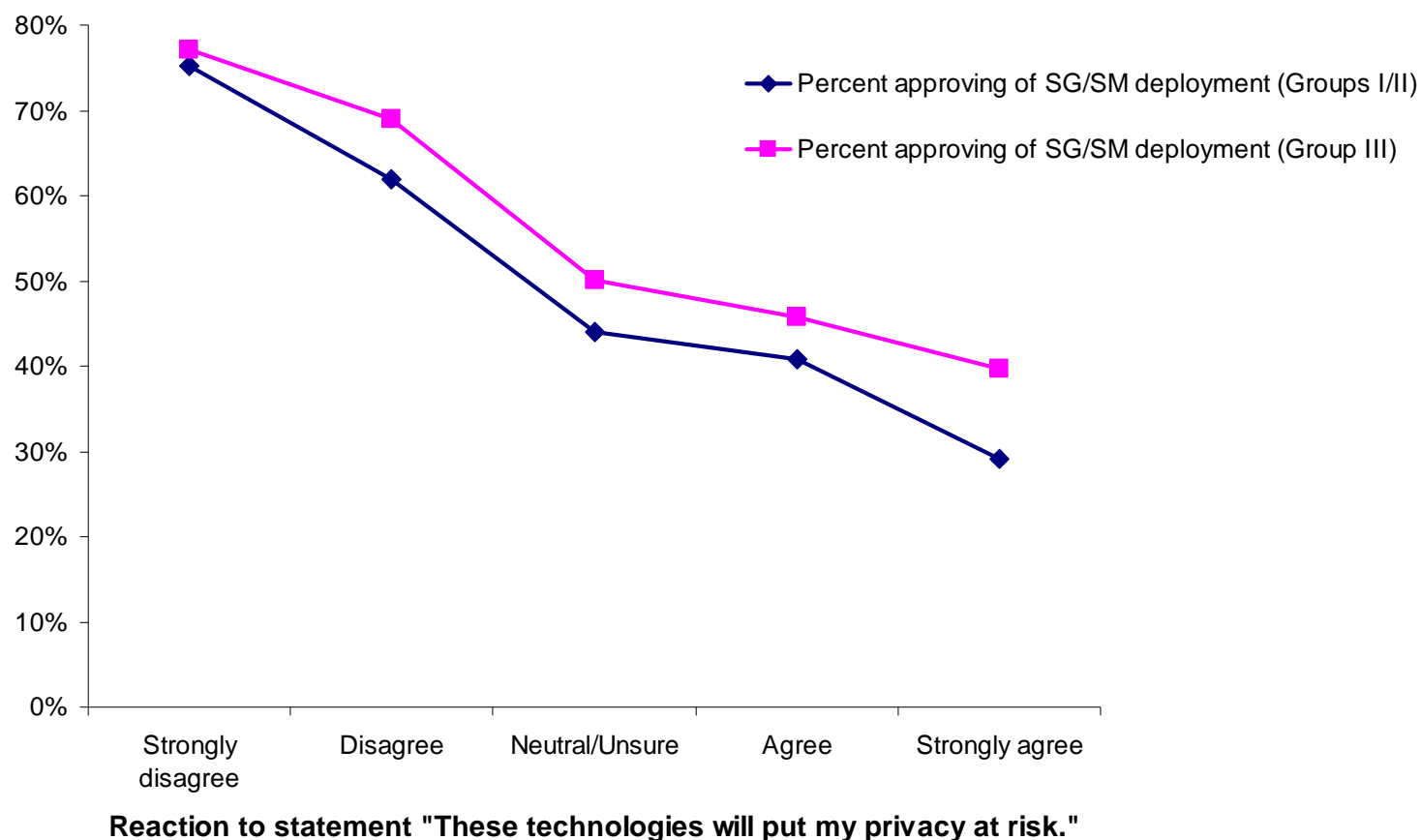
Some of the concerns are valid ones for which solutions are being developed. Others are grounded primarily in fear, myth, and misinformation. It doesn't matter which is which. They are there. They have to be addressed.

Sources: Smart Grid Today, November 29, 2010. Columbus (OH) Dispatch, February 28, 2011.



These perceptions are a strong driver of opinions on smart grid and meter merits as a whole...

Percent of respondents who approve of plans to deploy smart meters for each of five levels of privacy concern



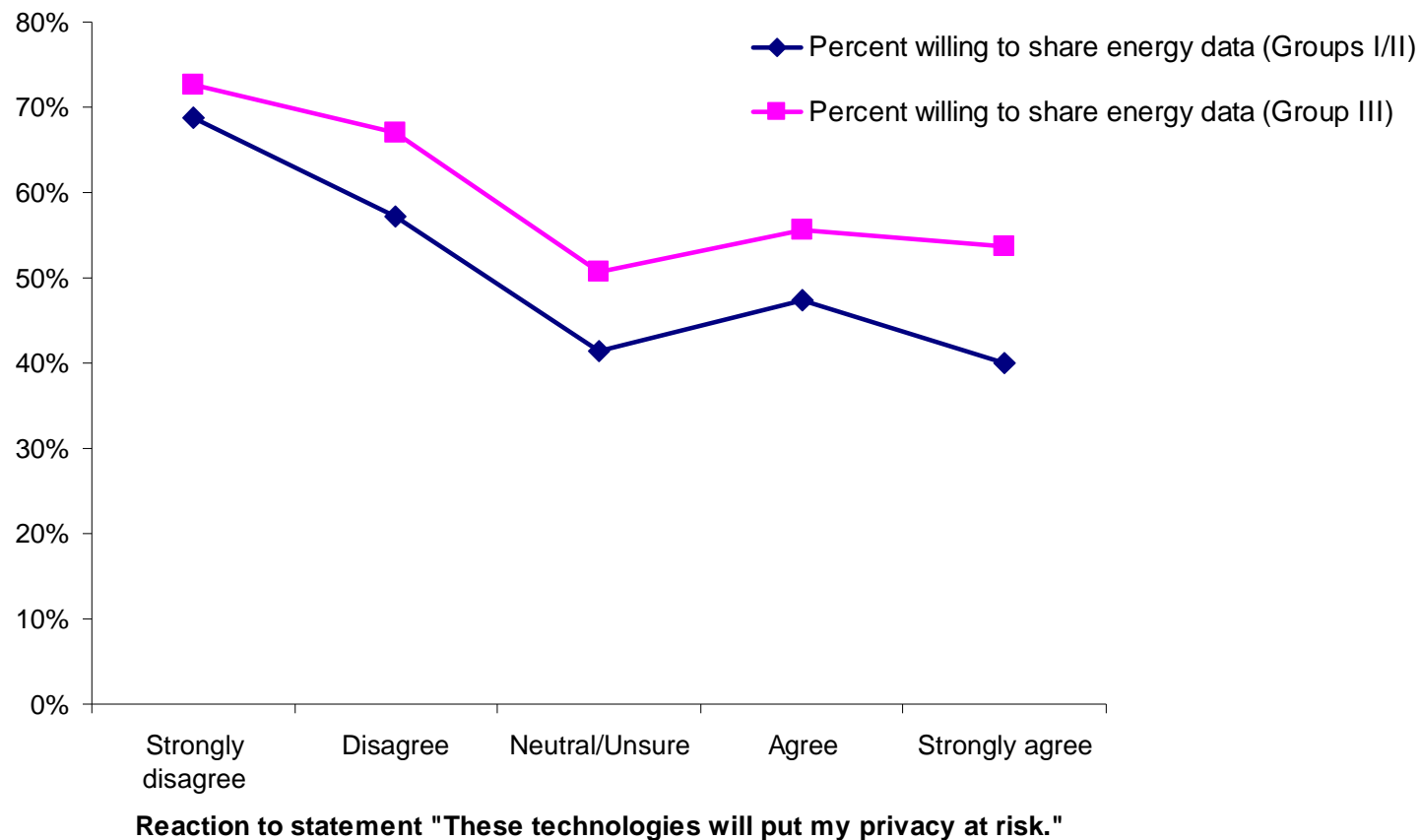
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 8118; GI/GII population-weighted.



... as well as individual behaviors and engagement on which achievement of conservation and other goals rely

Percent of respondents who are/are not willing to share energy data to get benefits for each of five levels of privacy concern among respondents



Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 8118; GI/GII population-weighted.



There is evidence that people may accept some risk in exchange for benefits if they truly understand the risks

- Those who strongly agree that smart meters and energy data availability will compromise their privacy are more likely to oppose the sharing of data with their providers and other parties than to approve of it, and are more opposed to smart meter and smart grid programs in general than in favor of them.
- However, those who are in moderate agreement with statements that their privacy will be compromised actually are somewhat more likely to approve of data sharing and of smart meter/smart grid programs in general.
- Those neutral or positive on the privacy concern issue are far more likely to be in favor of both data sharing and technology deployment.

The implications of this are consistent with what we already observe in many facets of 21st century life. People do not want to take part in things that are major compromises to their privacy – but they are willing to trade some privacy risk for clear benefits. Concerns must be addressed and real privacy holes plugged – but it is likely that good safeguards, well-communicated, are sufficient. Seeking to eradicate every possible privacy risk entirely – or even promising complete elimination of risk – is most likely overkill.

Do you use credit cards? Web searches? Mobile phones? Online banking?

How does

knowledge



affect opinions and decisions
about energy usage, options,
and programs?



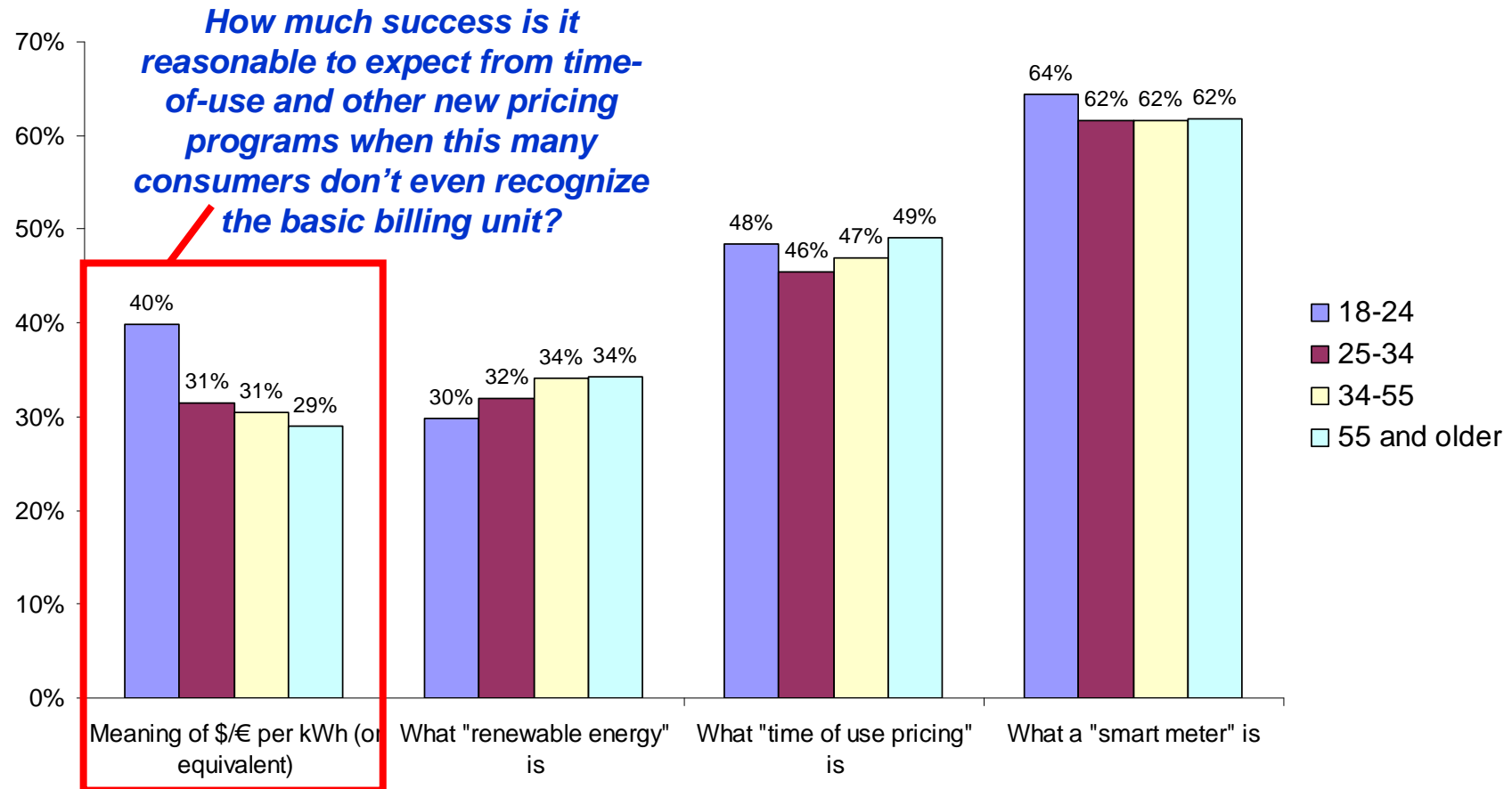
Insufficient knowledge to understand the changes underway and form opinions about them is widespread

- **Over two-thirds** of respondents admit that they **do not know** whether their local providers or governments have smart meter or smart grid deployment plans in place – and that does not even count those who “know”, but are wrong
- **Over half** of the respondents **do not know** if their energy provider has a green energy program that is available to them, a recurring theme over the past three surveys
- **Almost a quarter** of those who participate in green energy programs **have no idea** if they pay a premium for that power, or how much more they pay
- **Thirty-five percent** of respondents are not yet sure whether they will consent to share data on their household energy use
- When asked about specific benefits or concerns about smart meter and smart grid programs, **40-50% do not yet have an opinion** of whether those benefits or concerns are in store for them
- Even basic knowledge is surprisingly absent – about **one-third** of respondents **do not recognize** the basic billing unit for power consumption, and **at least five percent do not know** who their provider is



With a few exceptions, different age groups did not show deviations in knowledge gaps or areas of uncertainty

Percent of respondents that did not know the answer to the specified question or statement



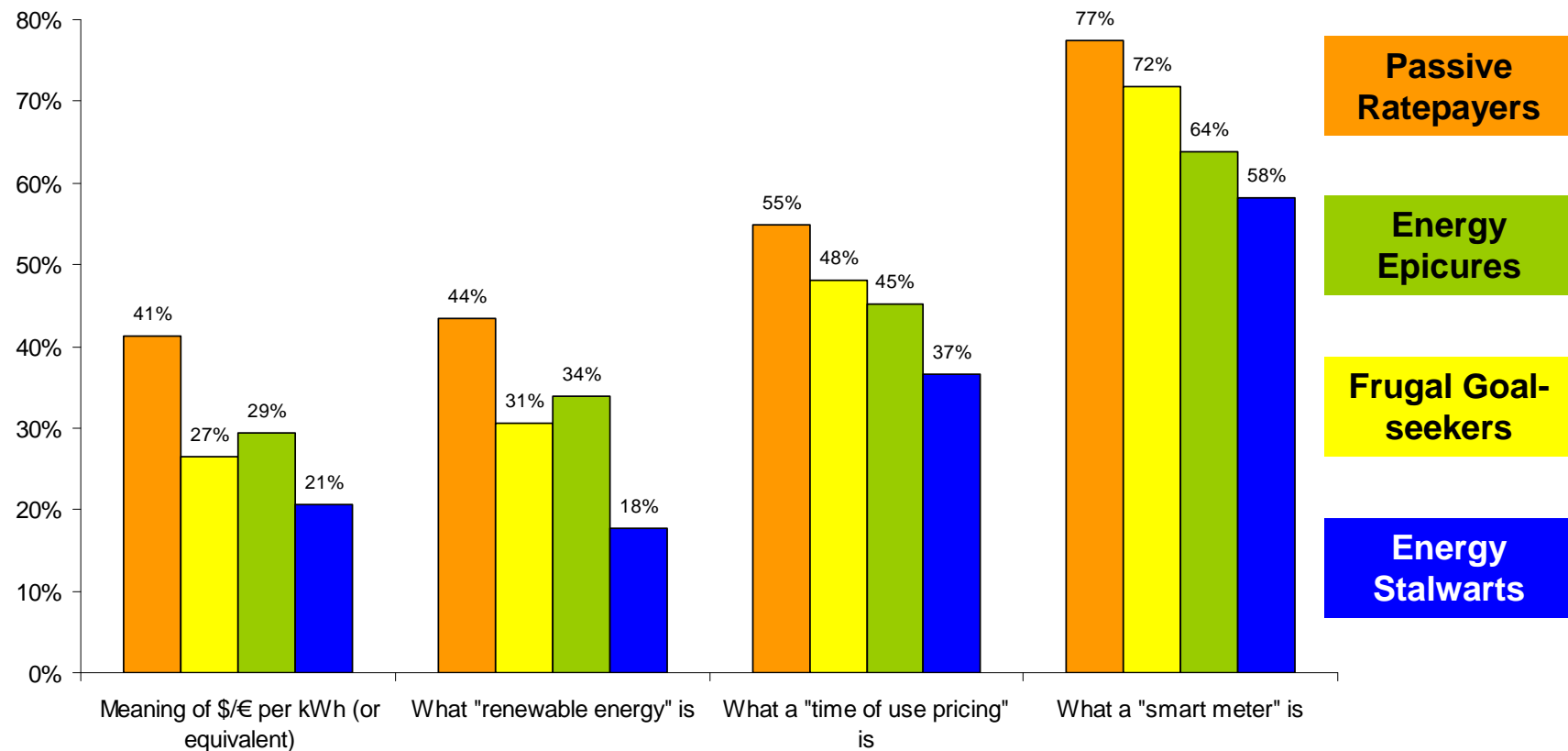
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



Looking at more sophisticated behavioral profiles provides a look at things that may drive likelihood of certain knowledge gaps

Percent of respondents that did not know the answer to the specified question or statement

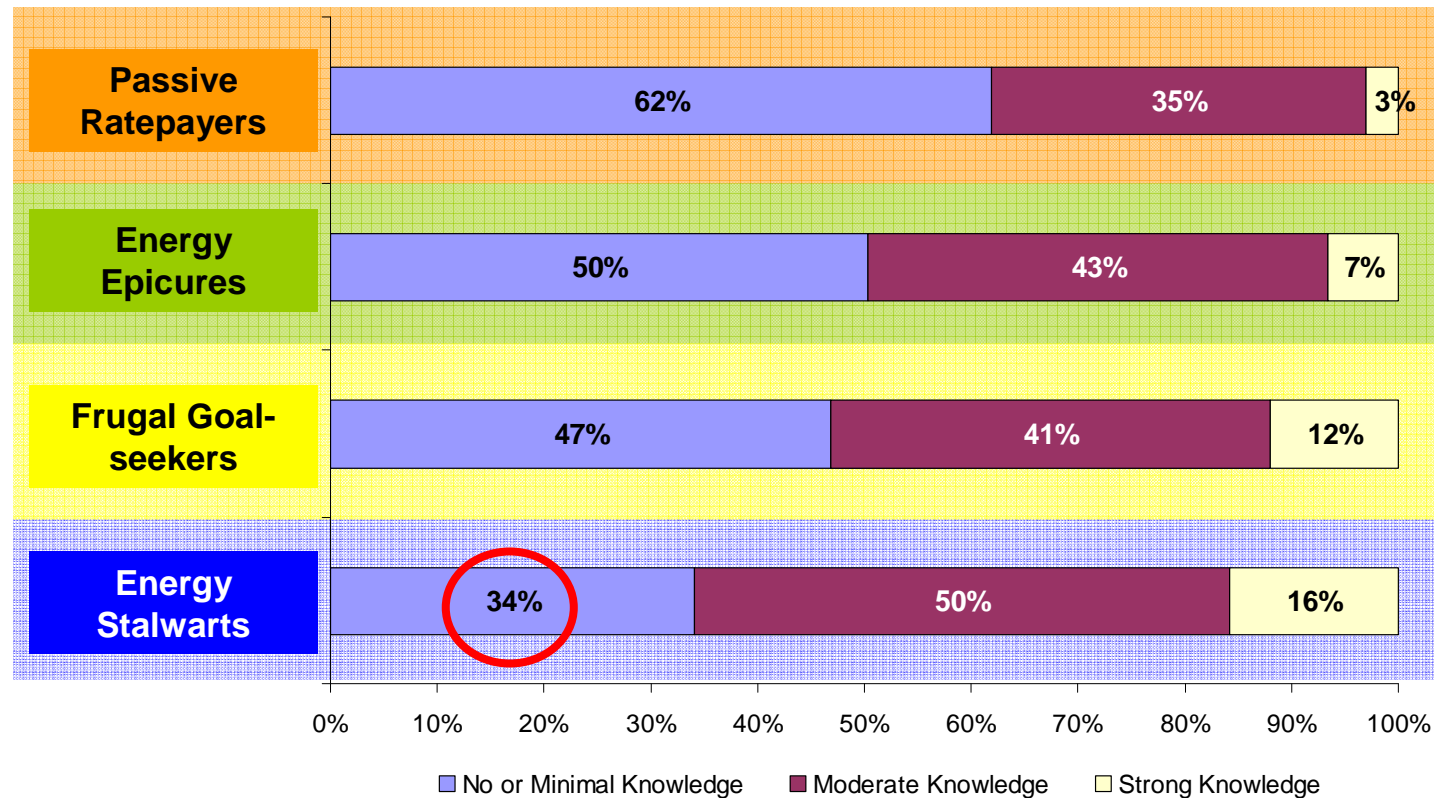


Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



Energy Stalwarts are five times more likely to have strong knowledge in all queried energy topics as PRs



However, it is surprising to note that even among the well-engaged Energy Stalwart group, over one-third have minimal knowledge

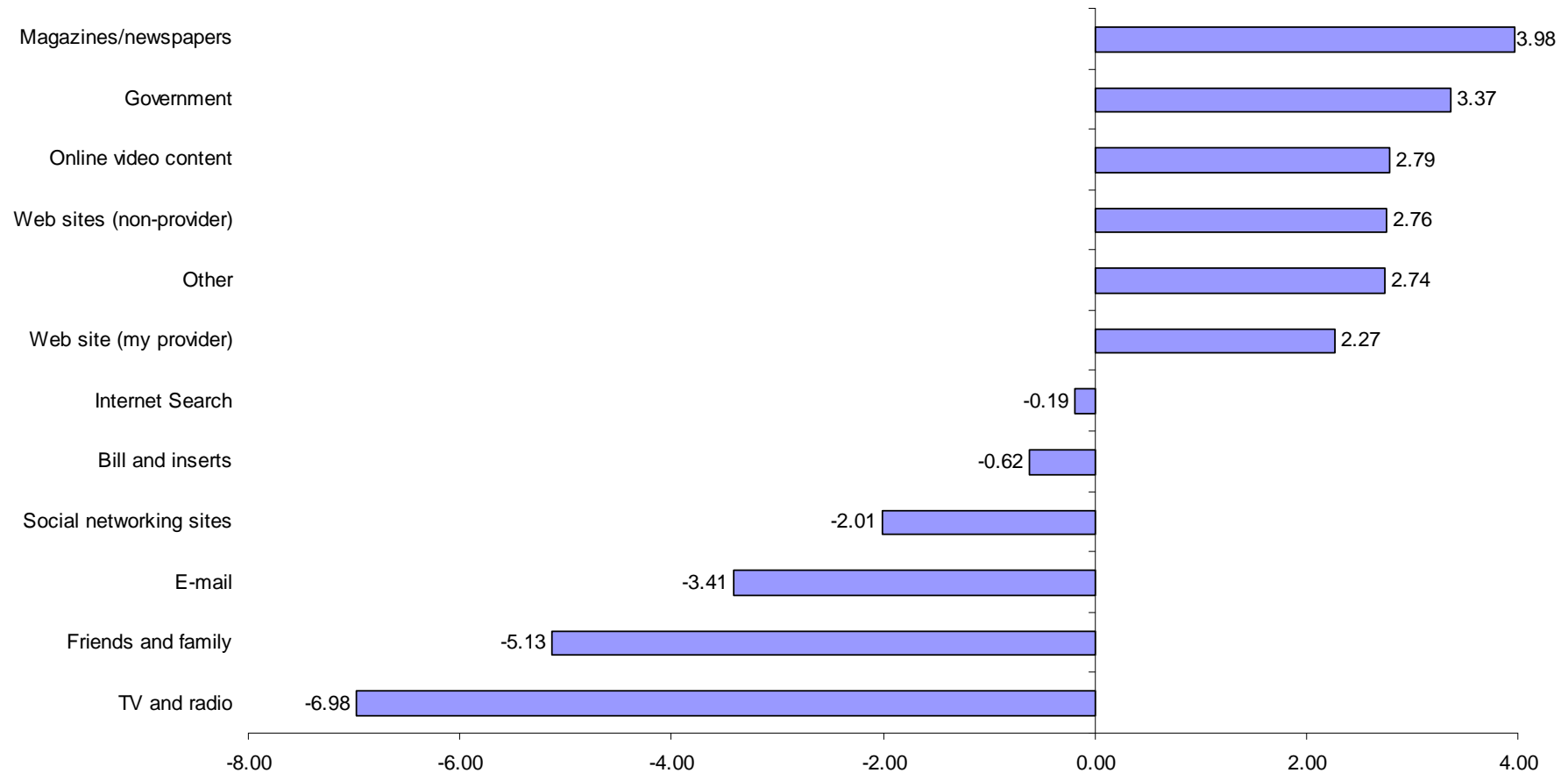
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



Some knowledge sources may be providing better or clearer information at present than others

Consumer Knowledge Index for each source listed as primary



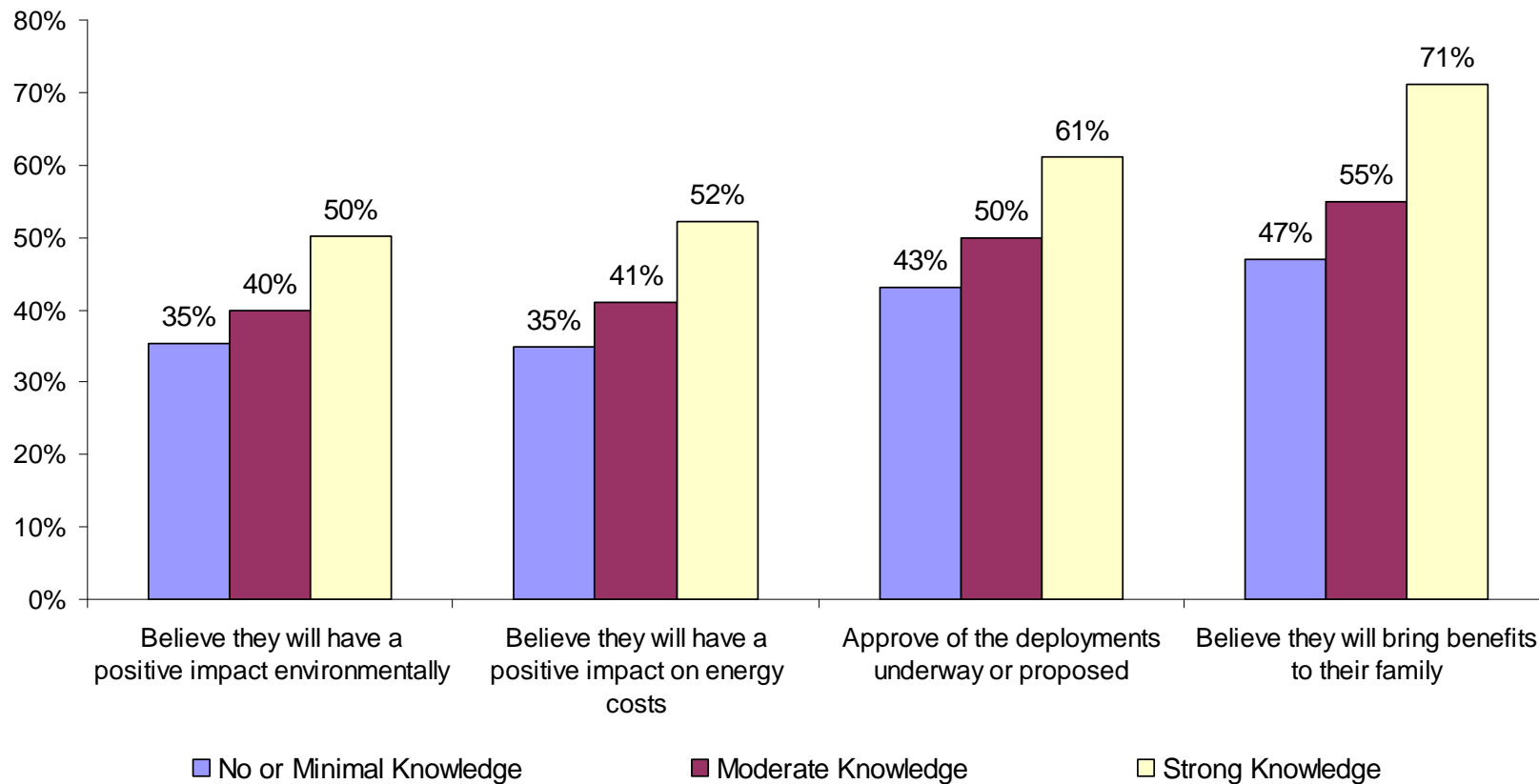
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



Higher levels of knowledge strongly correlated with increased belief that new technologies and programs will bring benefits

Percent of respondents holding positive opinions of smart meters and smart grid deployment plans locally (underway, proposed, or hypothesized)



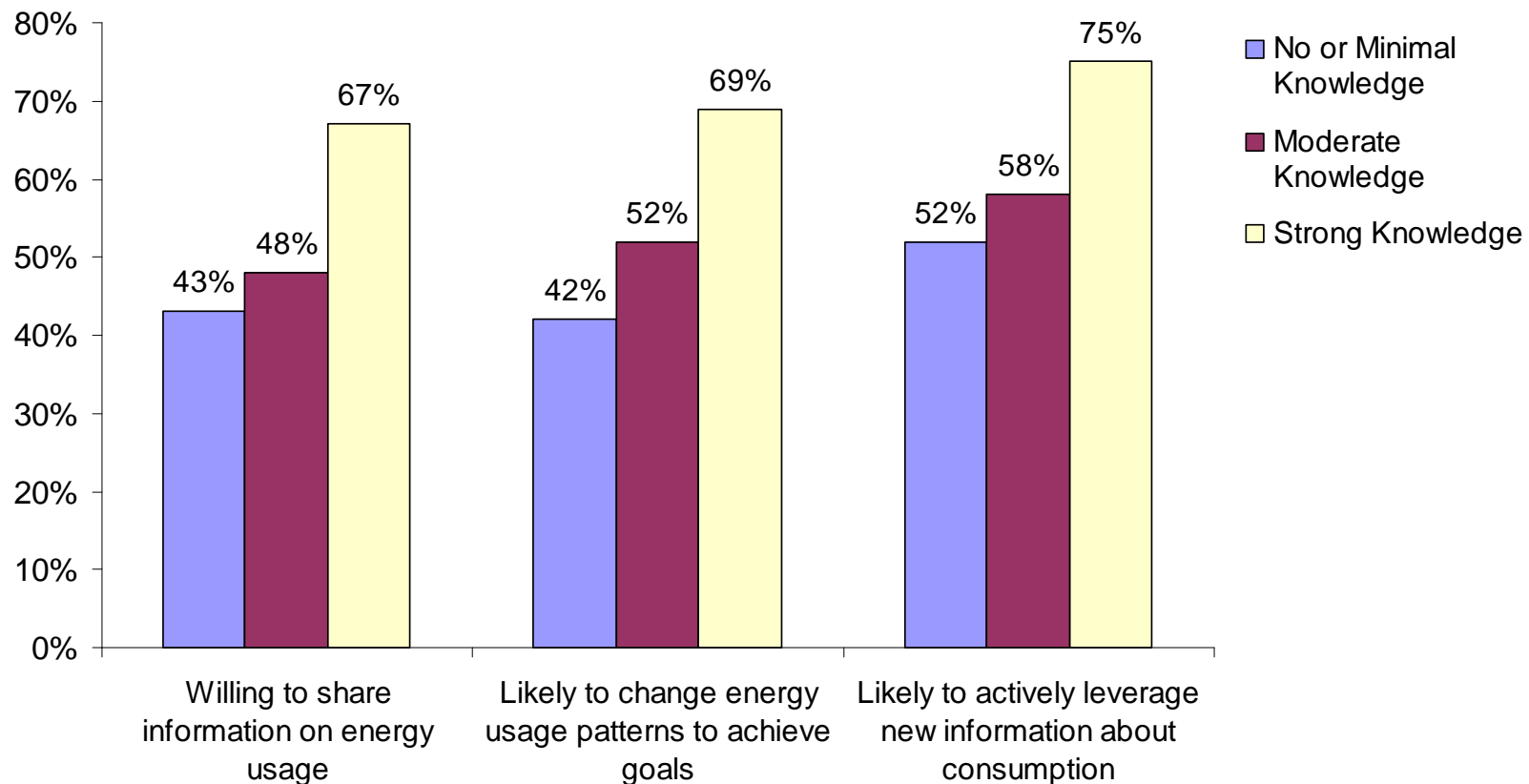
Sample Size = 6045 (Group I and Group II only); population-weighted.

Source: IBM 2011 Global Utility Consumer Survey



More understanding and awareness also leads to a higher likelihood that new behaviors will be adopted

Percent of respondents expressing their likelihood of taking on specific behaviors or behavioral changes



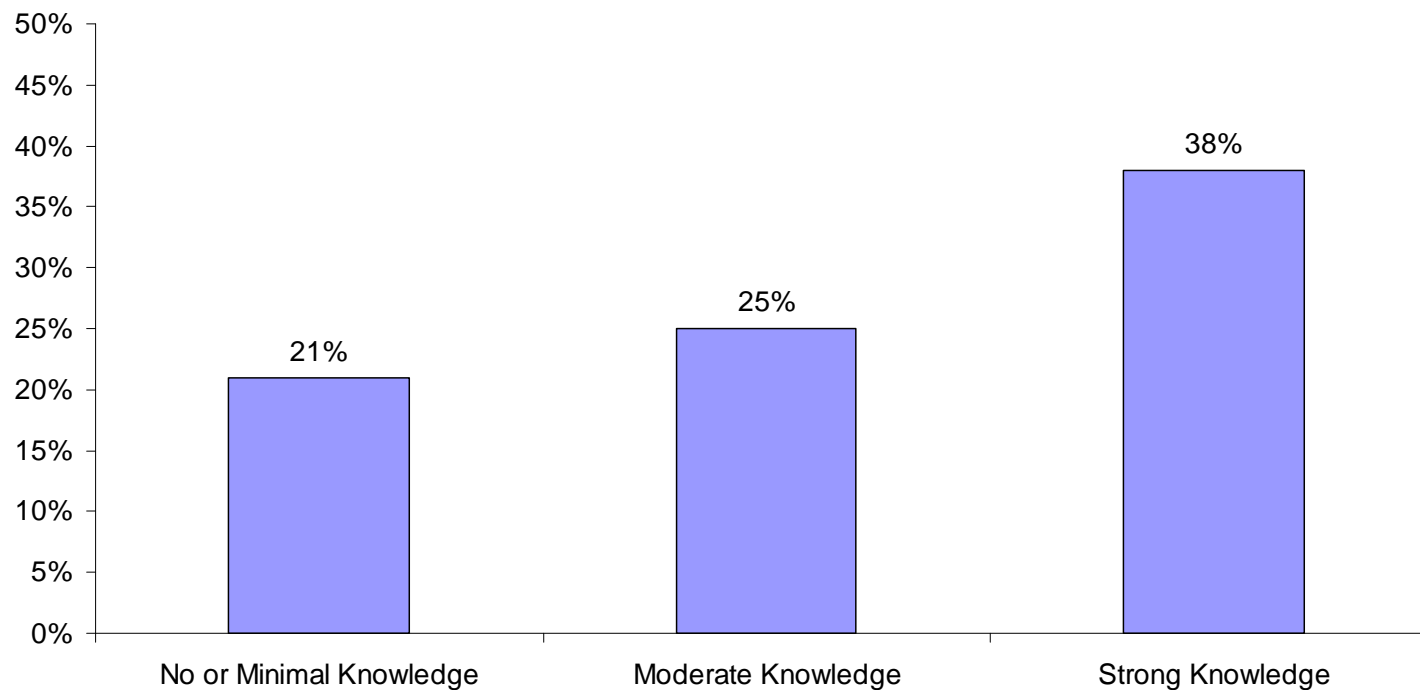
Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



However, more questions are generated about energy data privacy as consumers become more knowledgeable

Percent of respondents who expressed a concern that smart grid/smart meters pose a new risk to privacy



This speaks to the importance of acknowledging privacy concerns and explaining how they will be addressed as the education process continues

Source: IBM 2011 Global Utility Consumer Survey

Sample Size = 6045 (Group I and Group II only); population-weighted.



Sir Tim Berners-Lee on personal data privacy, March 2008:

“It's mine - you can't have it. If you want to use it for something, then you have to negotiate with me. I have to agree, **I have to understand what I'm getting in return...** I think consumers' rights in this are very important. **We haven't seen the results of these systems being used.”**

He wasn't talking about smart meters, home energy networks, or energy data here. But could he have been?

Is this the sort of line of thinking that is causing concern among many consumers? Could more information provide more certainty and buy-in?

Do consumers'

expectations



align with what we
are ready to provide?

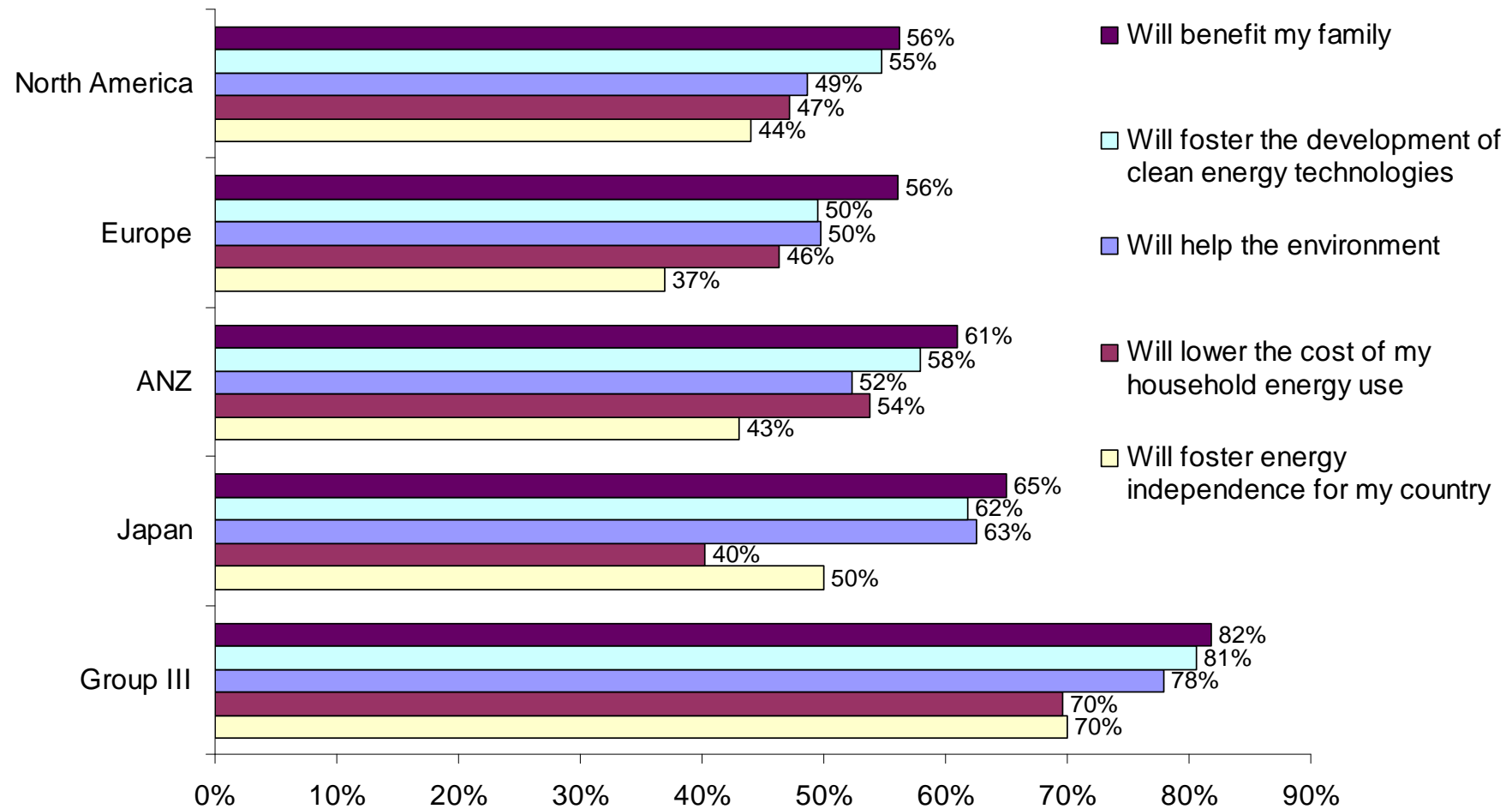


Consumers, having had a bountiful smart grid-enabled energy future laid out before them...





... are expecting that promise to be fulfilled



Sample Size = 8118; GI/GII population-weighted.

Source: IBM 2011 Global Utility Consumer Survey



Consumers' expectations for smarter energy products and services will be further shaped by their experiences with other industries...

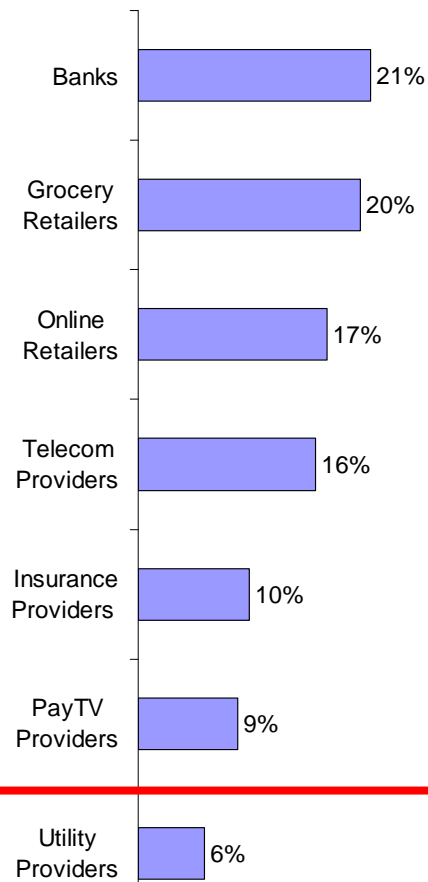
	Television consumer	Electricity consumer
Passive 	<ul style="list-style-type: none"> • Passive receipt of content • Limited sources of content generation • Major media companies exclusively control content • Provider-customer relationship one-to-many, driven by demographics and geography 	<ul style="list-style-type: none"> • Passive receipt of power • Limited sources of power generation • Incumbent utilities exclusively control power generators • Provider-customer relationship one-to-many, driven by demographics and geography
Active 	<ul style="list-style-type: none"> • Consumer interest drives new and more targeted choices in content • More interest in and leverage of information on quality indicators for content (e.g., TV program rating systems) • Broader choice of providers drives more active role in provider selection • Consumer does not control content, but has stronger influence via choices • Introduction of time-shifting technologies enables more active selection and management of content at individual level 	<ul style="list-style-type: none"> • Consumer interest drives new and more targeted choices in power supply • More interest in and leverage of information on quality indicators for content (e.g., green energy standards) • Broader choice of providers drives more active role in provider selection • Consumer does not control generation, but has stronger influence via choices • Introduction of residential time-of-use programs and green power options enables more active selection and management of generation deployment at individual level
Participatory 	<ul style="list-style-type: none"> • Interactivity and involvement with content and service providers increases • Consumers active in producing content and influencing content distribution • Rapid creation of new content types as technology change causes explosion in capabilities • Dynamic, value-based pricing of content • Provider-customer relationship dynamic is increasingly customized to specific entertainment and information interests, with consumer analytics a key driver 	<ul style="list-style-type: none"> • Interactivity and involvement with generation and service providers increases • Consumers active in generating power and influencing generation planning decisions • Rapid creation of new power supply options as technology change causes explosion in capabilities • Dynamic, value-based pricing of power (e.g., time-of-use) • Provider-customer relationship dynamic is increasingly customized to specific energy management goals, with consumer analytics a key driver

Source: Valocchi, M, A. Schurr, J. Juliano, and E. Nelson, Plugging in the consumer: Innovating utility business models for the future, IBM Institute for Business Value, 2007.

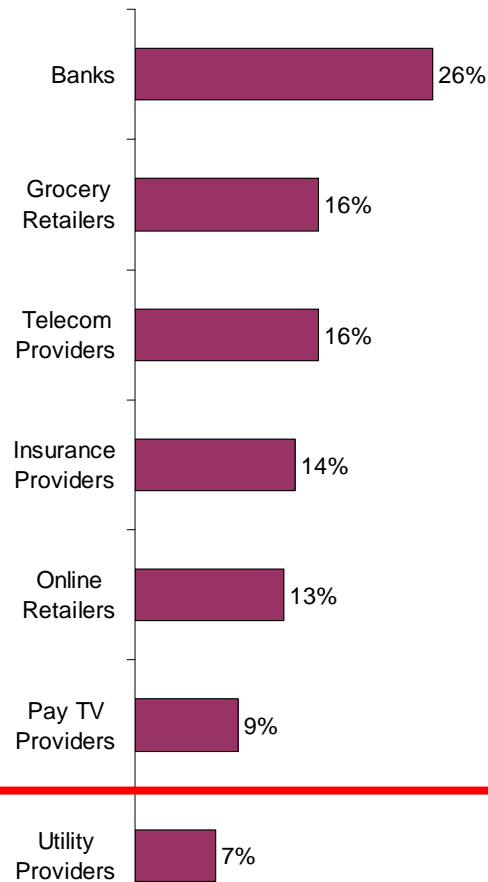


... which are often viewed as offering more personalization and innovation around consumers' specific needs

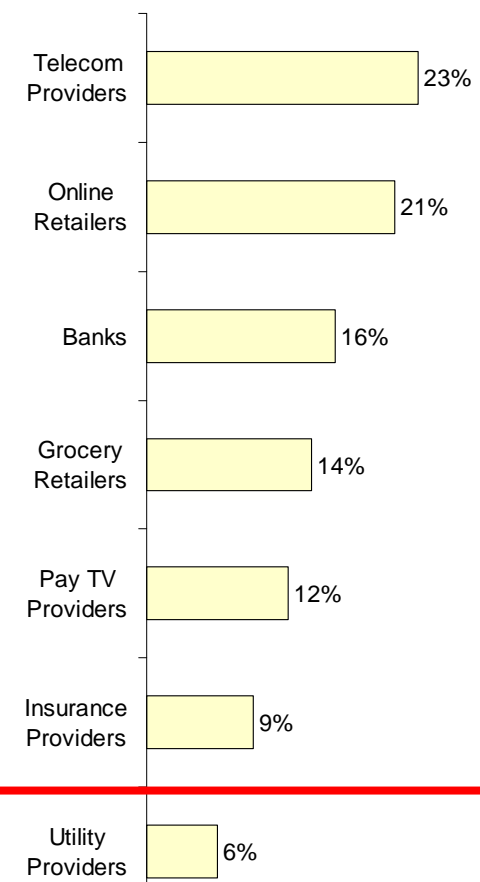
Understands me and offers products / services that are aligned with my needs



Treats me like an individual and delivers a personalized experience



Approaches me with innovative products or services



Agenda

- The 2011 IBM Global Utility Consumer Survey
- A look back at the past few years
- Summary findings
- ***Conclusions***



This is what the competitive environment of the future looks like



Yves Behar Autographed

Companies with expertise in creatively marketing to consumers are entering the market at a rapid clip. How will energy providers communicate with them in a way that gets them as excited about their offers?

2011 International Consumer Electronics Show, Las Vegas, Nevada. Photo credits: Allan Schurr



How consumers feel about the evolution of their providers today speaks to a need to refine, personalize, and target communications



Their **influences** are still skewed toward the traditional – but increasingly these are sources that are from places where utilities have no control over the tone or accuracy of the messages

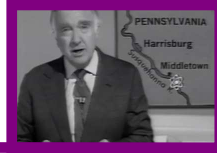
Consumers have mixed **perceptions** of their current providers and what they will be able to do in the future – and where there are negative perceptions, more negative reactions are likely

For customer buy-in to smart grid and smart meter plans, providing **knowledge** is an absolute necessity – the more consumers learn about what is occurring, the more favorable they are toward it

They have been promised – explicitly or implicitly – great benefits from the smart grid revolution, and their **expectations** are that those promises will be fulfilled

What can be done to keep perceptions (positive and negative) aligned with reality? How can expectations be shaped by providing more and better knowledge in the context of the most effective influences?

influences



Assess what factors and voices are most likely to influence your customers – and tailor communications to those stimuli

- Though cost is important for most consumers, it's not uniformly the #1 influence across localities (and many of the cost elements will not be in the provider's control).
- The second most important category – more influential than environmental and the actions of family and friends – is concern for national economic health and energy independence.
- There are strong differences in receptivity to messages across groups
 - More passive consumers are most interested in saving money and strengthening their national economy; more active ones place green concerns first and then focus on money and economy.
 - Older consumers are much more swayed than younger ones by concerns about saving money and contributing to a strong national economy.
 - Younger consumers respond much more strongly to green messages than older ones, and slightly more to the influence of friends.
- Providers can control messages about other the benefits and drawbacks of new initiatives and programs – but so can other parties who, in aggregate, are now a stronger force.

perceptions



Inventory the positive and negative perceptions your customers have about you and develop communication plans with those at the core.

- Positive perceptions drive support and demand for new products and services; negative perceptions drive negative reactions and disinterest in trying new things.
- Most energy providers have many things that their customers believe they do very well, which will be helpful in gaining traction for future efforts – if you acknowledge the existence of negative perceptions as well.
- Some negative perceptions will be indicators of real shortfalls in communication or service. Aggressively address them now.
- Some fearful perceptions about the future will about legitimate technological, financial, legal, or privacy concerns. Acknowledge them, and then make clear what you are going to do about them.
- Other perceptions will be based on misinformation, fears, and lack of knowledge. You still need to acknowledge them – but take the opportunity to provide strong messages about why they are not possible or likely outcomes.

knowledge



Don't assume that consumers have accurate and common knowledge about your plans and targets - find the knowledge gaps and fill them.

- Much of the success of the smart meter and smart grid efforts in place today are heavily dependent on engagement of knowledgeable consumers – but knowledge of even basic facts around their own energy service is absent for many.
- There is a lot of good information for consumers out there – and a lot of bad information. It's impossible for most people to differentiate. It's going to be your job, not theirs, to identify which is which.
- Additional knowledge appears to have a strong impact on attitude toward fledgling smart meter and smart grid plans – so for long-term success of these programs, providing more and better information is non-negotiable.
- Recognize that all knowledge strengths and gaps are not going to fall along textbook demographic categories. Information and messaging will, more than ever, have to be tailored to priorities, existing knowledge levels, preferred information sources, and current perceptions of their relationship with you.

expectations



Consumers have been promised a lot with respect to the “new world of the smart grid”. And they want what’s been promised to them.

- Most of the benefits we talk about as possible outcomes have become things that a large percentage of people believe to be likely outcomes.
- There are also benefits, products, and services that aren’t even on the table yet that they expect, explicitly or implicitly – because they have gotten these from the companies with whom they deal in other industries.
- Personalization, interaction, information – and even engaging experiences – are available in other parts of their life. It’s going to be expected here as well.
- These “outside the industry” companies influencing consumers’ preferences are going to be increasingly moving into the industry, and the consumer marketing and sales skills they have will need to be replicated and improved upon in context of your business.
- Always pay attention to the fact that some of the companies entering this space already have consumer communication and marketing, as well as ramping up excitement for new products, as things they do expertly. Most of our industry has not had to do much of this in the past – but the time window to catch up with them is closing fast.



Consumers have been promised a lot with respect to the “new world of the smart grid”. And they want what’s been promised to them.



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