

IBM Institute for Business Value



Overview

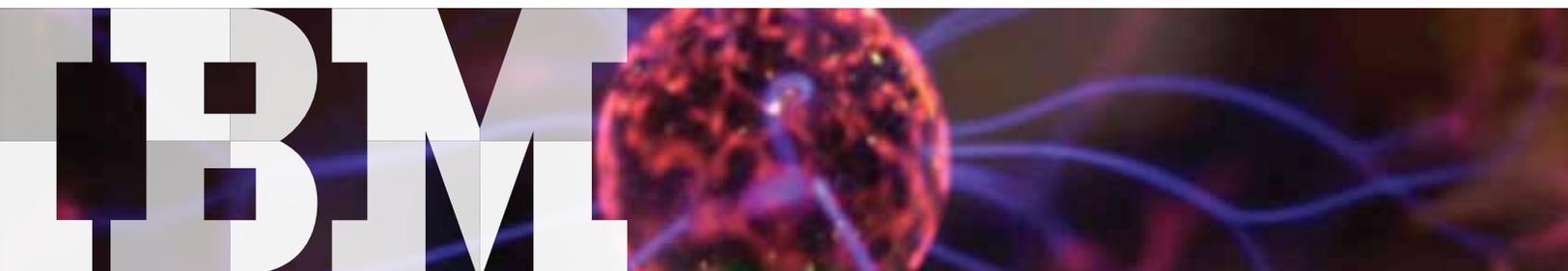
Consumers have tremendous expectations for future energy services. However, they are largely unaware that they need to take a more active role in managing energy decisions for their visions to become reality. In many cases, consumers lack even the basic knowledge necessary to accomplish this. Utilities and other smart grid advocates need to improve information transfer to consumers to build broader support and the customer engagement that can follow. Delivered through trusted and generation-appropriate channels, this information must address consumers' specific knowledge levels, most important motivating influences and current perceptions of providers.

Knowledge is power

Driving smarter energy usage through consumer education

Expectations have been running high for what smart meters and smart grid technology will provide to residential energy consumers in the long run. In consumers' minds, gaining more control over energy use, improving environmental impacts and managing costs have been firmly associated with the term "smart grid."

Communications and media coverage related to government economic stimulus packages and environmental priorities have played a role in building these perceptions.¹ Further boosts have come from consumer-focused magazines like one whose cover page featured "Extraordinary Solutions for a Clean-Energy Century" and lists like the one that ranked smart meters one of the top 20 green technology concepts.² Even the numerous consumer surveys focused on consumers' future energy wants and needs, including our own 2007 and 2009 Global Utility Consumer Surveys, may have contributed to expectation setting through questions about a future rich with data, tools for energy usage control, and new products and services.³



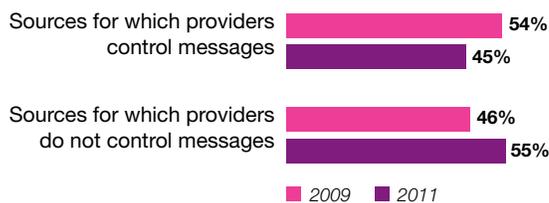
Our primary focus for the 2011 Global Utility Consumer Survey was not the compelling products and services consumers want in the future, nor did we highlight useful energy efficiency actions enabled by better technology and data. Instead, we sought to discover the key set of interconnections that define a consumer’s current expectations. We found that the following factors contribute most strongly to an environment of long-term expectations conflicting with short-term reluctance:

- Consumer perceptions established early on – such as saving money and reducing environmental impact – remain strong, but energy independence and national economic benefits, among others, are now getting similar levels of attention.
- A newer perception – that of a privacy threat posed by the increased availability of energy data – has emerged strongly, shaping attitudes along several dimensions.
- Consumers’ knowledge about their energy transactions with their providers is strongly correlated with perceptions that impact willingness to embrace smart meters and change energy consumption patterns.
- Despite its importance, the level of knowledge consumers have today about energy and their providers – even at the most basic levels – is unsatisfactory.

These factors are best explained in the context of a consumer energy experience chain, which recognizes that: expectations are driven by perceptions; perceptions are created by retained knowledge; and knowledge is retained in the context of core personal influences and passed on by trusted influencers. More fundamental information must be provided to consumers to increase this knowledge base – but through both traditional and new influencers, and with specific messages and channels tailored to suit different age groups.

If consumers are to be better informed and influences more targeted, what are the best ways to deliver the messages? The most significant finding about messages and influences comes from looking at the aggregate contribution of sources that have significant influence on consumers’ knowledge and perceptions. In this year’s survey, the percentage reporting that they use an information source that is not under the control of the consumer’s provider exceeds the percentage that uses a source directly under the control of the provider (see Figure 1). This points to a major shift in messaging power: consumers are now relying less on information that comes from their own energy provider and more on other influences.

Information source(s) to which consumers are most likely to go to get information about energy cost, environmental impact, alternative suppliers, or new programs and services (grouped)



Data shown for 12 countries represented in both 2009 and 2011 IBM Global Utility Consumer Surveys.

Figure 1: In aggregate, providers’ influence on messaging for their own customers is now outweighed by other sources.

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Conclusion

Without a good core knowledge level on which they can rely, consumers can only work with what they learn through their most trusted channels, even if inaccurate. Companies involved with the planning for, deployment of and business development related to smart grid and smart meter technologies should consider the following actions to address critical gaps in the influence-knowledge-perception-expectation chain:

- Recognize that certain motivators and channels of delivery hit specific demographic categories most effectively; align messages and channels to optimize impact.
- Leverage key lessons from behavioral science and economics to better align consumer response with knowledge resources and provider messages.
- In the short term, forego the push to educate consumers on the details of smart meters and smart grids. Instead, renew focus on the most basic information for the majority, including assuring that data privacy protections are in place. Provide self-learning resources for those who are ready for more complex ideas.
- Consider a more social strategy for communicating knowledge and success stories to reach groups where traditional communication via bill inserts and advertising fails to connect with important groups of customers. This is particularly true for consumers with strong family dynamics and consumers younger than 25.
- To help address the knowledge gaps and areas of concern for smart meters, learn from and employ marketing techniques being used in other industries facing technological and consumer engagement upheaval.

How can IBM help?

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 - **Selected Energy and Utilities Solutions and Offerings:** Intelligent Utility Network, SAFE Framework and In-formed Decision Making, Customer Operations Transformation and Generation Strategy
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