

PennEnergy®



SURVEY REPORT

Digital Transformation to Advance Utility Customer Service

A joint PennEnergy/Cognizant Survey Report on:
“Evolving Utility Engagement for a Tech Savvy Consumer Market”



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Foreword:

THE UTILITY CONSUMER is changing. As key technologies continue to become more mainstream the needs and expectations of today's utility customer is quickly evolving. The pervasiveness of the Internet, smart mobile devices, and social media are just a few of the technology spaces that are creating a consumer base more connected, informed, and independent than ever. As Utilities work to align themselves internally for better operational processes, what is increasingly clear is just how critical it is that energy enterprises also keep their attentions keenly focused on meeting the expanding demands of their engaged and tech savvy consumer.

Your Consumer Expects a Better Customer Experience

From retail, to telecomm, to banking—today's consumer is saturated with service and engagement experiences rich in technology that allows them a greater breadth of self-service, social connectedness, and personalized options. Influenced by these experiences is the emergence of a customer base that is no longer satisfied with the role of being a passive consumer. This desire for enhanced engagement and services is perhaps best demonstrated in the rise of awareness and adoption of Home Energy Management Systems (HEM) and the integration of distributed generation resources such as solar power.

According to a recent research report from Navigant, major market moves, such as Google's purchase of Nest Labs signaled to vendors, utilities, service providers, and retailers that the value in HEM and automation was finally attaining acknowledgement. In turn, consumer awareness has also begun to increase bringing into focus products and services that can help better manage and control home energy consumption. Aligned with this increasing awareness, the Navigant report projects cumulative HEM revenue is expected to exceed \$22 billion from 2014 to 2023.¹ This projected growth in the HEM and automation market points to a growing base of utility customers that are looking to have a more proactive role in their energy usage, easier access to services, and more personalized and self-directed engagement through advanced technologies.

Beyond these influencers is the fact that Millennials are poised to take over as the primary Utility consumer segment from Baby Boomers and Generation-X in the

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near future. According to The Pew Research Center, 2015 marks the year when Millennials in the U.S. will surpass Baby Boomers.¹ This is an especially important development when considering the technology loving, Internet obsessed, and social media addicted persona that has become all but synonymous with the Millennial generation.

To better understand how utilities are managing these shifts toward consumer expectations for next generation customer service, Cognizant partnered with PennEnergy to ask utility organizations how current and emerging technologies are influencing their customer experience processes and efforts to engage Millennials as an increasingly important demographic.

For this survey utilities were asked to share insights about their customer service processes in relation to key technologies and trends, such as social media, big data, customer self-service, and demographics focused initiatives. What emerged is a portrait of an industry that is cautiously optimistic, resulting in a very moderate level of maturity in adopting next generation customer service processes and exposing some important disconnects between industry strategies and evolving consumer demands.

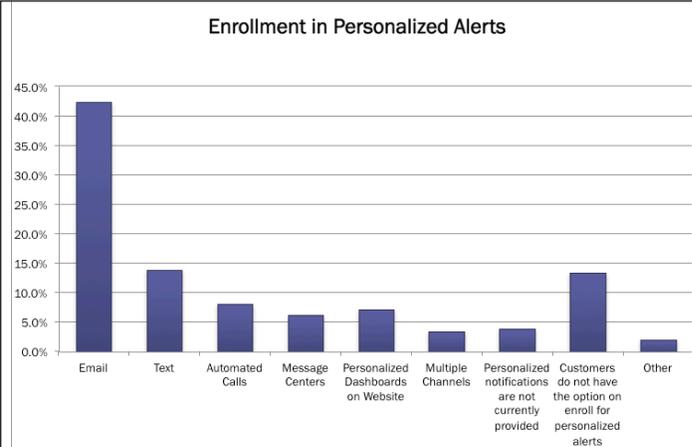
This report aims to distill these findings to provide deeper insights to the utility industry as a whole as to which utility segments are excelling in specific areas supporting next generation customer service, and more importantly, provide an overview of the tactics energy enterprises should consider in staying ahead of the vital advanced customer experience curve for greater success and continued growth.

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THIS SURVEY GENERATED several key insights on how utilities are, and could be, approaching next generation customer service to meet the evolving needs of their consumer base. Utilities can use those findings to define, better enhance, or implement initiatives that will help them better meet the demands of today’s tech-immersed customer market.

For Core Customer Experience Process Automation Digital is King

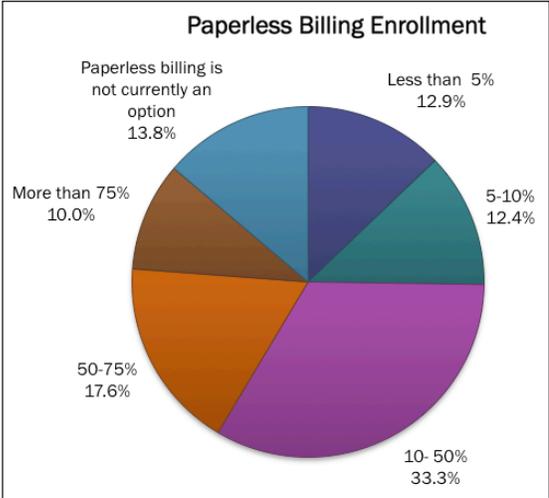
Utilities have made significant progress on core customer experience process automation such as paperless billing, alerts and reminders. Staying true to an ‘efficiency first’ approach, utilities are now focusing on digitization (collaboration, analytics, smart agents, voice analytics etc.). Needless to say paperless billing is first on the list and most utilities have focused on it in a big way.



Respondents reported that almost 74% of their customers are enrolled in some kind of personalized alert and 27.6% of the utilities stated that more than 50% of their customers receive paperless billing.

Of the utilities that claimed to have more than 50% of customers

enrolled in paperless billing, over 58% of that claim was made by utilities with over 1 million customers. Further, electric utilities lead the way in paperless billing with 67% of their customers compared to natural gas at 30% and water at 12%.



These results reveal that when it comes to the cutting edge of advanced core process automation for customer engagement, for

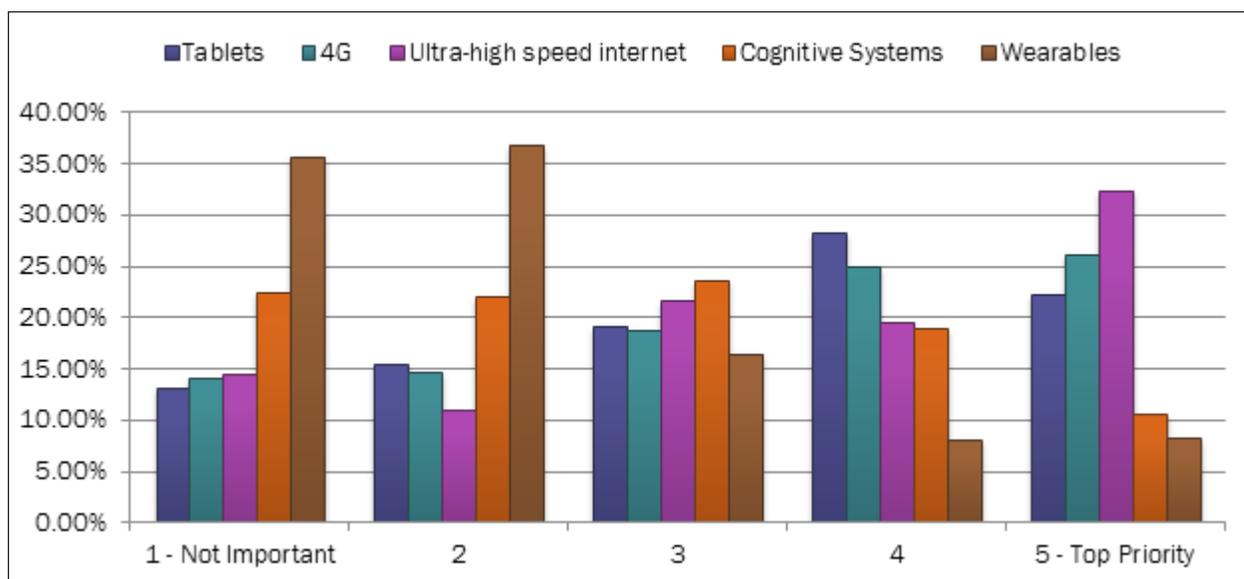
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utilities, type and size matters. This is a recurring theme in this survey report.

Overall, the results retained provide a snap-shot of an industry that acknowledges enhanced processes have merit, but a lingering reluctance to invest in advanced engagement beyond established processes and platforms such as billing and email.

Constrained Influence and Adoption of Next-Gen Technologies

When asking about specific technologies, such as smart and mobile devices, high speed internet, wearables, and video streaming for enhanced customer service, our survey reveals that utilities are progressing in some areas, but overall, are still flat in terms of maturity in leveraging advanced methodologies for next-generation customer engagement.



Next-Gen Technologies like wearables, augmented reality, and video valet are beginning to influence customer service—but the response is very muted in utilities. Utilities appear to view high speed internet (4G etc.) as a good thing in general, with responses implying a base focus on mobility solutions and its ability to deliver benefits. Interestingly, Utilities do not seem to think much about video platforms for engagement, such as conferencing solutions, and are still primarily reliant on established channels like chat and email to connect with customers.

Meanwhile, consumer tools such as cognitive systems and wearable's (Smart watches/bands, eyewear, etc.) consistently ranked as either having little to no

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importance at all in terms of influencing what technologies utilities would employ for customer engagement through the next two years.

However, ranking best amongst next-gen technologies in influencing customer engagement and experience were tablets and high speed internet. Comparing these two technologies may at first seem to challenge a cohesive picture in how utilities are currently approaching their adoption of next-gen technologies for customer service in terms of purpose and application. Yet a connection between the two in terms of collective value for utilities becomes clearer when looking at these technologies under the umbrella of mobility. Results imply utilities have an understanding of the importance of mobility not just for internal processes, but in terms of customer engagement, with most focusing their efforts in this area in terms of next-gen investment.

2015 marks the year in which tablets sales are predicted to outpace PC sales (desktops and laptops).² Taking this into consideration, along with the expanding avenues for high speed internet access, the focus of utilities on tablets and high speed internet in the realm of next-gen technologies is easier to understand. As already presented, utilities are still highly reliant on established channels such as email and websites for core processes. Understanding this makes it easy to infer that such preferences would dictate a preference for next-gen technologies that supported these already established channels. From this perspective, results appear to support the theory where utilities are setting their attentions and applying value is once again in the realm of the known and predictable.

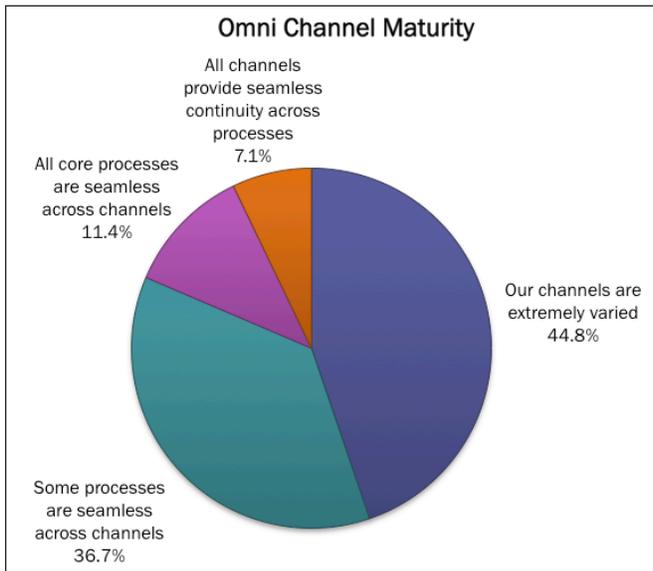
In keeping with these findings, IOUs, which are often privileged with more options in terms of investments and risk appetite, are the most progressive in terms of adoption of next-gen technologies.

OMNI Channel Still a Multi-Faceted Challenge

OMNI Channel – When asking utilities about their level omni channel maturity, 46.2% of respondents across all utility types affirmed their channels were extremely varied, yet 7.1% said all available channels provided seamless continuity across processes.

When asked what challenges utilities faced in omni channel integration, results

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revealed that rather than one primary obstacle, respondents revealed they were mostly equally challenged across a broad spectrum internal and external implementation barriers. This seems to imply that utilities overall are still very much behind in successfully adopting a varied, never mind seamless, multi-channel customer experience.

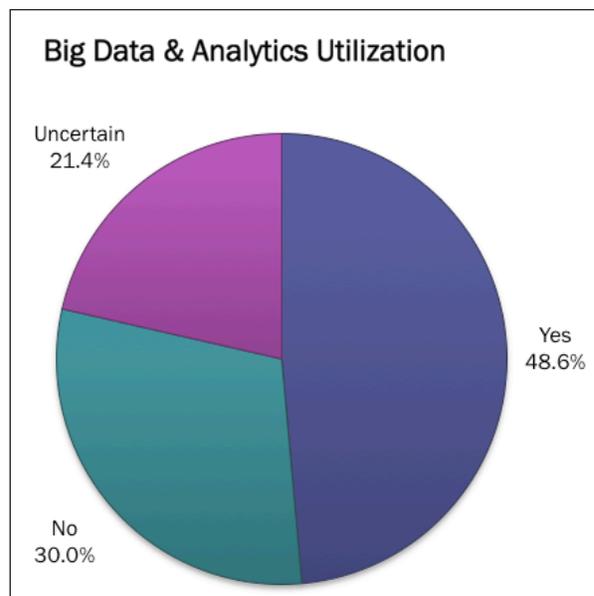
Of those that reported an extremely varied omnichannel offering, larger

IOUs once again took the lead followed by Municipal utilities. While no utility group ranked at any level of true significance in having all channels provide seamless continuity across processes, IOUs again ranked highest in this area.

A varied and consistent omnichannel experience is essential in meeting the evolving needs of utility consumers. As diversified and seamless interactions and transactions become the norm in peripheral industries, the demand for the same level of customer experience is only primed to grow.

Big Data & Analytics Utilization Still Maturing

Big Data & Analytics – Utilities have made significant strides in analytics with almost 50% saying they are utilizing customer service analytics. Respondents also mentioned collecting data on customer service channels, websites, and smart grid. However, results reveal there is still some uncertainty when it comes to any definitive leverage of big data & analytics for customer engagement and service. Of those leveraging big data & analytics to improve customer experience, IOUs once again took a strong lead overall, proving



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themselves the most progressive in this area. Among all utility types, those with a consumer base under 500,000 were least likely to have or plan to implement big data & analytics for customer service and engagement.

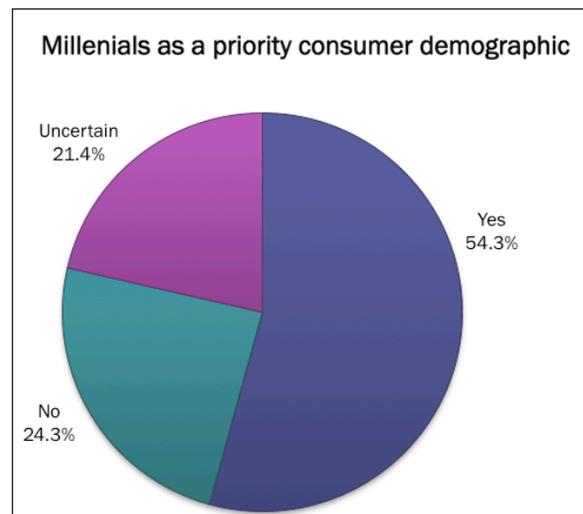
A unified analytics strategy may still be an Achilles heel for most utilities. However, big data has a purpose, and each utility must determine how it is best served by the new flood of information big data technologies provide, and implement them with priority.

A Conventional Approach to an Unconventional Demographic

Demographics – To implement a successful customer experience management (CXM) and social strategy, millennials have to be firmly a part of the plan. In order to gauge the preparation of utilities we asked a series of questions focused around millennials.

The importance of Millennials is still very much a split and mostly undirected area of customer experience. More than half of respondents (53.8%) believe that Millennials will be a priority consumer demographic for utility customer service and engagement through the next 2 years. Respondents from large utilities are stronger in this belief than mid and small sized utilities, while amongst those who believe millennials will be a priority demographic, regulated utilities took the lead. Within utilities there emerges a split among management about millennials

being a priority consumer demographic. This internal disconnect could serve to make it difficult for strategies incorporating millennials to be adopted and realized.



Social Media–Check!

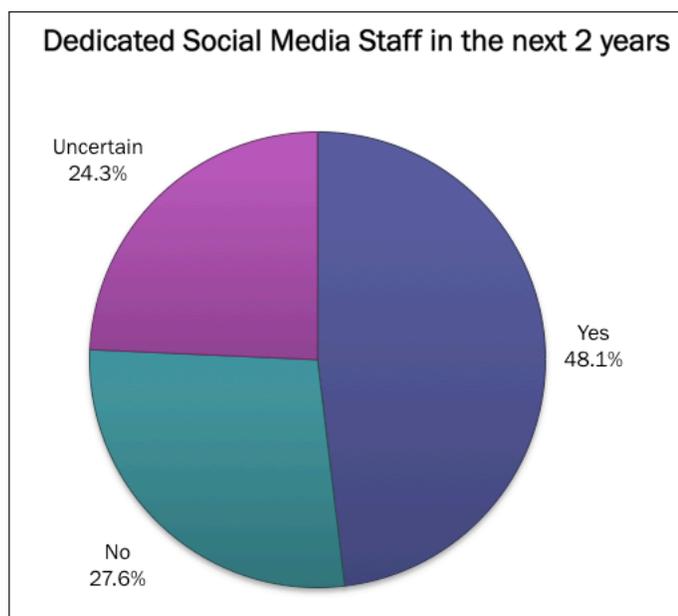
Social Media – Survey results reveal that utilities mostly seem to look at having a social media presence as a ‘to be checked’ requirement rather than a full resource for implementing advanced engagement and services. While a wide majority of utilities have an established social media presence, they are still, on average, not

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leveraging this channel for core processes such as billing or service requests. Instead, most continue to relegate the use of social media to less 'critical' communications, such as educational content on energy use and efficiency.

- :: Among all utilities, enrollment and energy tips are the most used communications for social channels
- :: For core functions, outages / emergency notifications are the most highly leveraged for social media channels

Looking further into social media, it was determined that one way to measure the perceived value of this channel was to assess investment in the medium in terms of dedicated staff. While nearly half (48.1%) of utility respondents said they have, or will have in the next 2 years, a dedicated social media staff, some 38% of those represented large utilities, with Investor Owned Utilities (IOUs) taking a strong lead.



Based on the received responses, what becomes evident is that larger utilities, and of those, ones that are privately steered IOUs, take the lead when it comes to embracing advanced processes in the social media space. However, it is important to note, that altogether, maturity in social media is still limited.

Not surprisingly, most utilities have a social strategy focused on addressing the needs of millennials, while a vast majority also wanted to focus on 'green' issues/ initiatives to satisfy millennials. Beyond that, a significant number of respondents expressed uncertainty as to what, if any, strategies geared toward millennials their utility planned to employ.

Millennials matter today for the future of all utilities, especially as they will soon represent the majority of the consumer base. Strategies geared toward millennials need to be prioritized internally with buy-in from top down.

Recommendations

Go Digital!

Digital is the future. Utilities have already achieved higher efficiencies by focusing on core process automation like paperless billing, alerts, warning etc. Now is the time put in place a Digital Transformation strategy, now is the time for Customer Service to be proactive (from being reactive) and now is the time to take Customer Service to the next level. Technologies needed for this transition already exists (wearables, augmented reality, cognitive computing etc.).

How can Utilities better leverage Next-Gen technologies?

A majority of utilities responded that they were not leveraging technologies like video streaming (video valet), augmented reality, cognitive computing etc. in customer service, which is explained through newness of these technologies to the market, although there are examples of adoption in other industries. Utilities must stay vigilant in their watch for opportunities to leverage newer technology in areas that require high touch customer experience like energy efficiency surveys or areas like revenue protection.

Big Data Analytics may not be as complicated as you think.

Sophisticated capabilities are available in tools readily accessible and the benefits they provide to customer service agents and customers far outweigh the costs. Our experience also shows that those with a unified strategy reap more benefits.

Should a Utility focus on Millennials and a Social Media strategy for them? Our survey says YES! Why?

Millennials are a dominant demographic segment and are characterized by their high adoption of technology (like Social Networking) for day to day routines. Our survey shows that Utilities with dedicated social teams had more services on social channels indicating better ability to connect with customers more

With a majority of Utilities indicating that Millennials are a focus, or will be a focus in the next couple of years, a Social Media strategy for Millennials is an opportunity waiting to be exploited.

Omni Channel – Focus on building channel intelligence or let building channel intelligence drive your omni channel efforts. Why?

Survey results show that challenges and drivers are varied; there is no single dominant driver/challenge. Aligning those to single focus – like channel intelligence – will streamline efforts.

To Conclude

Historically, utilities are slower at adopting new approaches as they are already challenged by a business model that requires them to meet a bottom line while enabling their consumer base to use less of their revenue generating services. Add to this the uncertainties of the current regulatory landscape and the costs involved in infrastructures to support advanced processes, and the reluctance to move forward at any considerable pace becomes clear.

In any business landscape, stagnation can often prove more detrimental than well executed risk in terms of success and customer buy-in. Today, utilities may no longer be privileged with a mostly captive consumer base and are challenged with much less passive consumers and regulators. This presents an important question—are utilities truly better served by not firmly committing to implementing advanced processes for an enhanced customer experience? Today’s current market climate suggests they are not, as they risk leaving their consumer base to turn to a growing number of alternatives. Companies from peripheral customer service spaces are emerging to fill the tech gap in utility customer service – if Utilities are NOT making an effort to be proactive in meeting customer needs, someone else will.

Forward looking utilities have the opportunity to embrace these shifts and invest in clearly identifying, leveraging, and growing their advanced processes to meet the rapidly evolving needs of their consumers.

References:

- 1) “Home Energy Management” – Navigant Research
<https://www.navigantresearch.com/research/home-energy-management>
- 2) “Forecast: Devices by Operating System and User Type, Worldwide, 2010-2017, 1Q13 Update.” – Gartner
<http://www.gartner.com/resId=2396815>

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Survey Methodology:

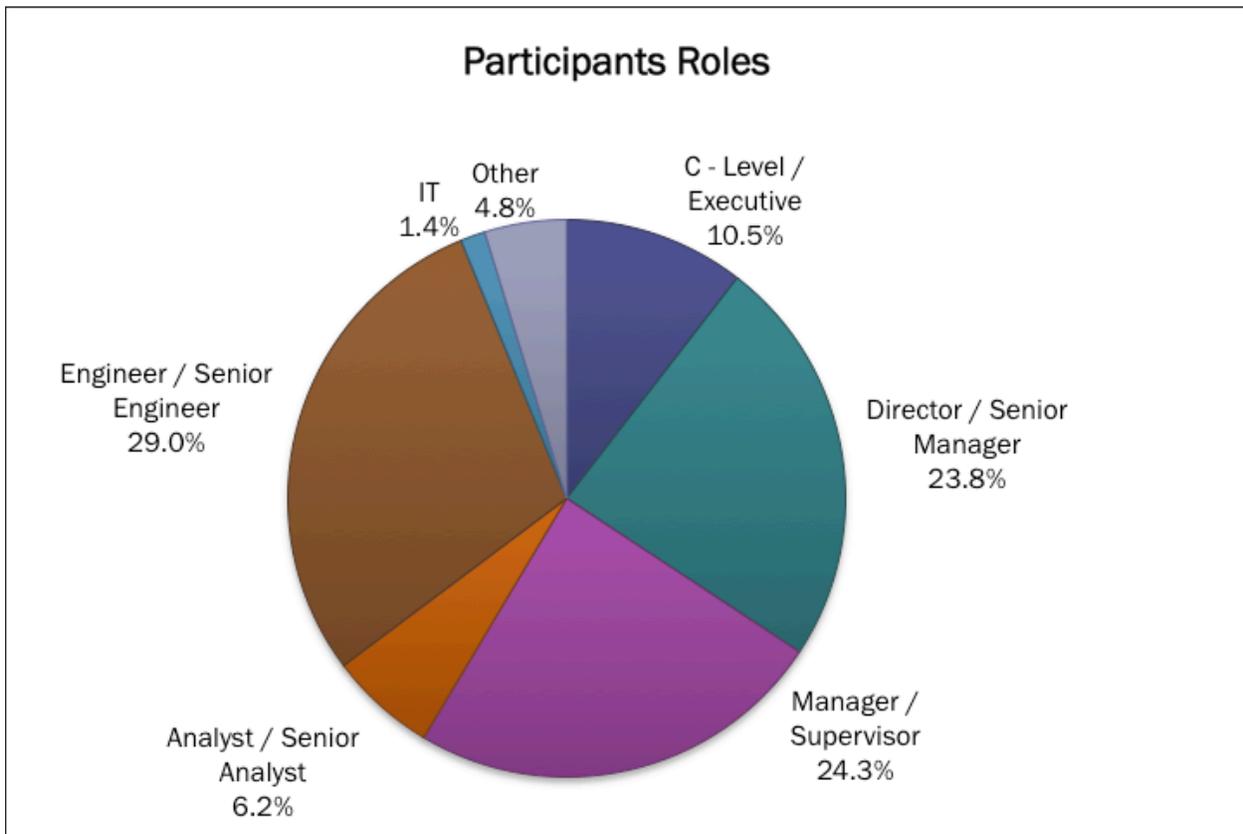
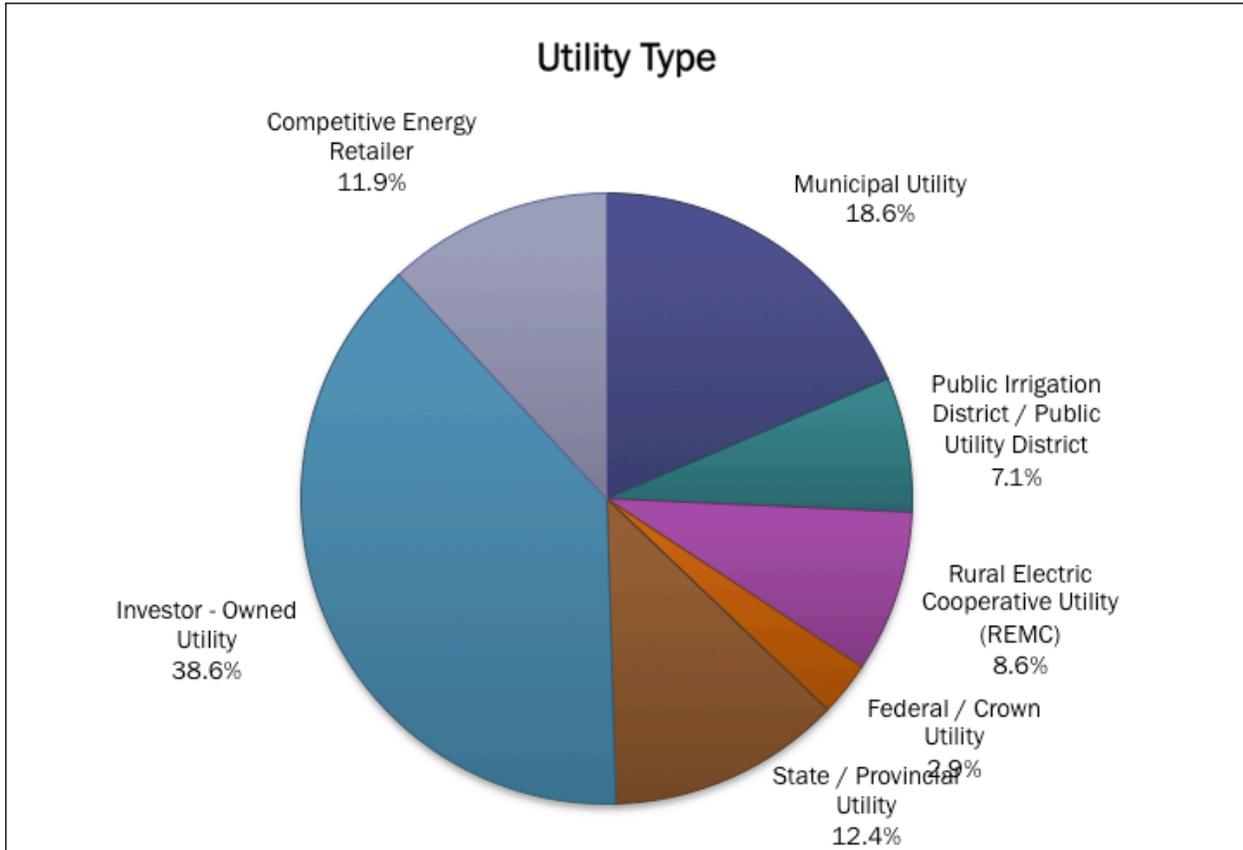
The survey was sent to 107,137 potential participants and complete responses were received from 210 individuals. The confidence level for the survey is 95% with a margin of error of 6.76%.

69.0% of respondents were located in North America. 38.6% of respondents were from Investor Owned-Utilities, 11.9% were from Competitive Energy Retailers, 18.6% were from Municipal Utilities, 7.1% were from Public Irrigation Districts/ Public Utility Districts, 8.6% were Rural Electric Cooperative Utilities, 2.9% were from Federal / Crown Utilities, and 12.4% were State / Provincial Utilities.

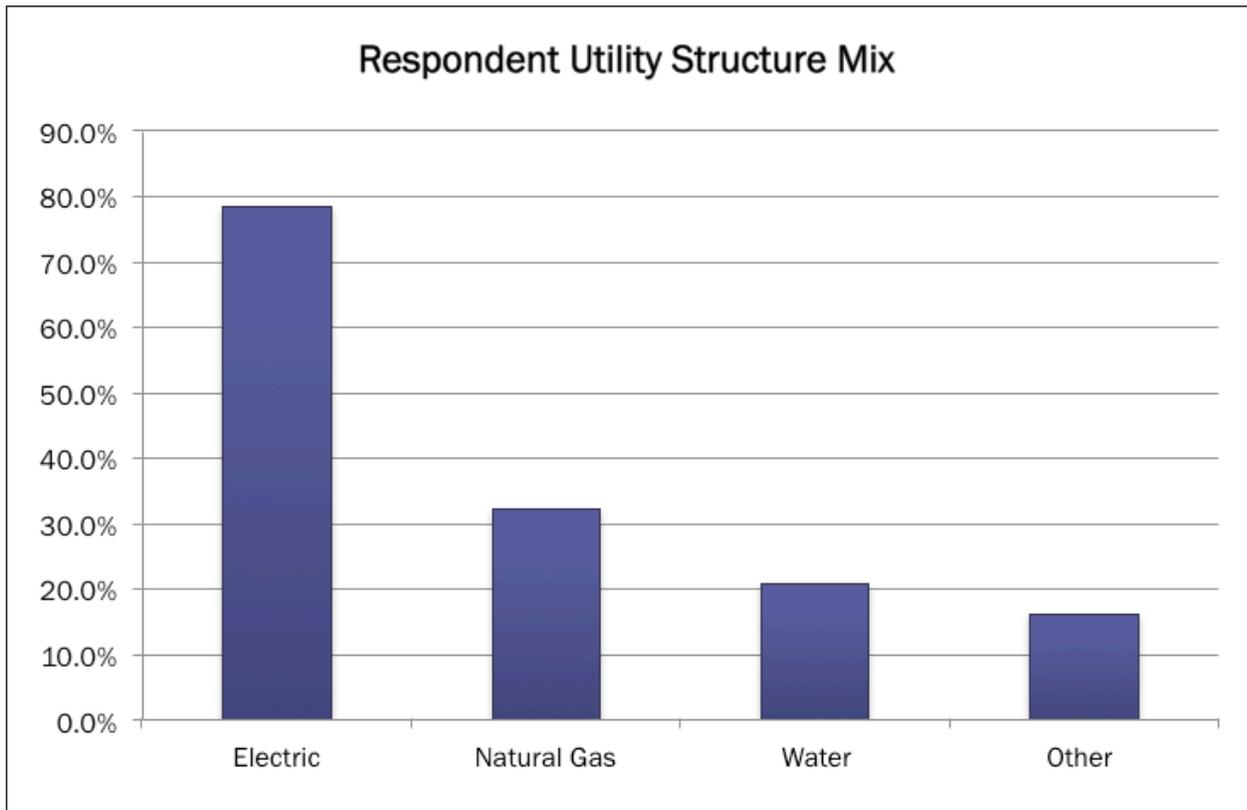
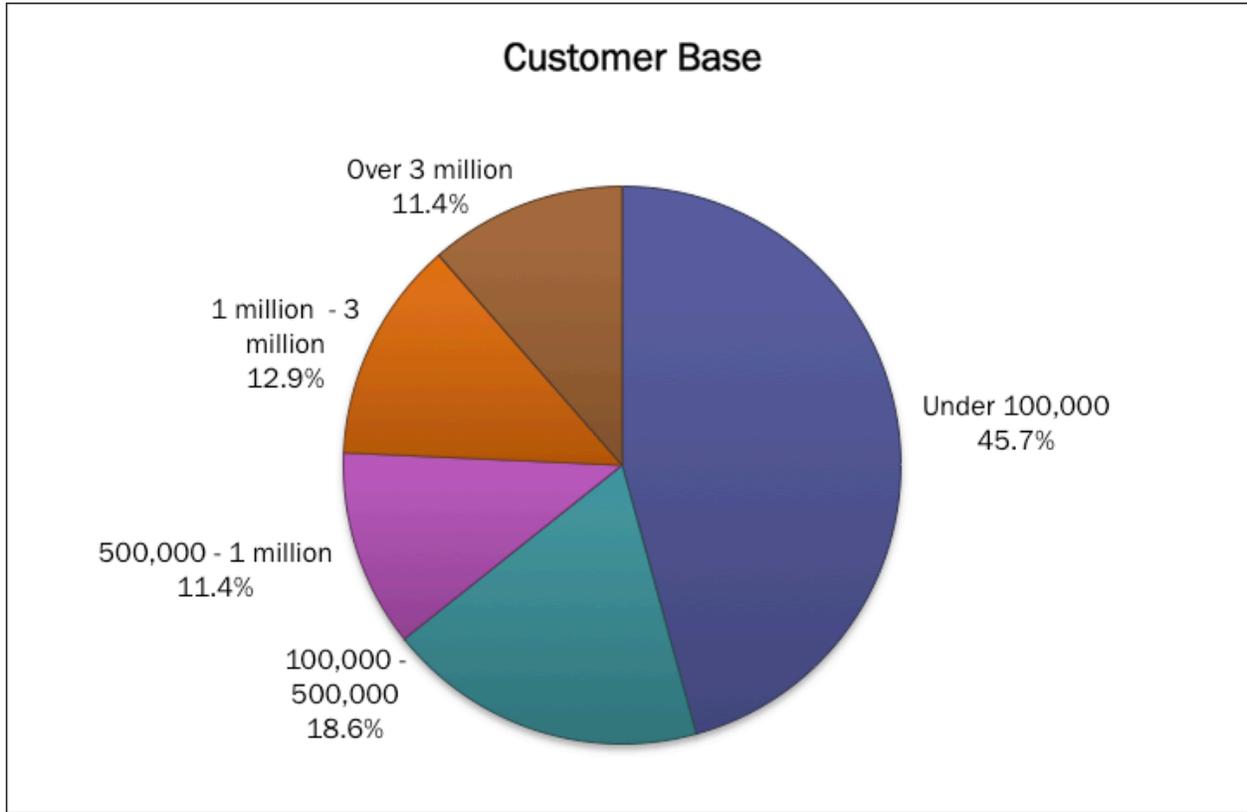
When broken down by respective roles in the company 29.0% of respondents were Engineers / Senior Engineers, 10.5% of respondents were C-Level / Executive Managers, 23.8% were Directors / Senior Managers, 1.4% were Information Technologists, 24.3% were Mid-level Managers / Supervisors, 6.2% were Analysts/ Senior Analysts, and 4.8% had other roles.

When considered by their customer base 45.7% served under 100,000 customers, 18.6% served between 100,000 and 500,000 customers, 11.4% served between 500,000 and 1 million customers, 12.9% served between 1 million and 3 million customers and 11.4% served over 3 million customers.

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Appendix:

1) Please indicate which channels customers can use to interact with your company for the following functions today.

- a. Enrollment for Products and Services
 - Website
 - Interactive Voice Response (IVR)
 - Social Media
 - Mobile Apps (Smart Phone/Tablet)
 - Live Chat/Email
- b. Move in/Move out
 - Website
 - Interactive Voice Response (IVR)
 - Social Media
 - Mobile Apps (Smart Phone/Tablet)
 - Live Chat/Email
- c. Billing Information & Payment
 - Website
 - Interactive Voice Response (IVR)
 - Social Media
 - Mobile Apps (Smart Phone/Tablet)
 - Live Chat/Email
- d. Energy Usage/Goals/Tips
 - Website/Email
 - Interactive Voice Response (IVR)
 - Social Media
 - Mobile Apps (Smart Phone/Tablet)
 - Live Chat/Email
- e. Reporting Outages
 - Website
 - Interactive Voice Response (IVR)
 - Social Media
 - Mobile Apps (Smart Phone/Tablet)
 - Live Chat/Email

- f. Restoration Updates
 - Website
 - Interactive Voice Response (IVR)
 - Social Media
 - Mobile Apps (Smart Phone/Tablet)
 - Live Chat/Email
- g. Complaints
 - Website
 - Interactive Voice Response (IVR)
 - Social Media
 - Mobile Apps (Smart Phone/Tablet)
 - Live Chat/Email

2) Is social media important to your organization's current Customer Service/Engagement strategy?

- a. Yes
- b. No
- c. Uncertain

3) Which of the following social channels does your company have an official presence on?

- a. Facebook
- b. Twitter
- c. Google+
- d. LinkedIn
- e. Foursquare
- f. YouTube
- g. Vimeo
- h. Pinterest
- i. Instagram

4) Does your company have, or will have in the next 2 years, dedicated staff/department for social media initiatives?

- a. Yes
- b. No
- c. Uncertain

5) Please rate on a scale of 1 to 5 (1 being Not Important and 5 being Top Priority) the social channels that will be a part of your Customer Service/Engagement strategy in the next 2 years.

- a. Social Media Platforms (Examples: Facebook, Twitter, Google+, LinkedIn)
- b. Video Platforms (Examples: YouTube, Vimeo, Vine)
- c. Live Video Conferencing (Skype, Google+ Hangouts, FaceTime)
- d. Mobile Apps (Smart Phone/Tablet)
- e. Text Alerts
- f. Chat/Email

6) Please rate on a scale of 1 to 5 (1 being Not Important and 5 being Top Priority) how the following consumer tools will impact your choice of Customer Service/Engagement technologies through the next 2 years.

- a. Smart Phones
- b. Tablets
- c. 4G
- d. Ultra-high speed internet
- e. Cloud Computing/Storage

7) With the proliferation of technologies that allow for broader customer self-service options, do you think utility Customer Service/Engagement will become more autonomous in the next 2 years?

- a. Yes
- b. No
- c. Uncertain

8) Is Big Data (structured and unstructured) currently considered an important business resource by your company?

- a. Yes
- b. No
- c. Uncertain

9) Will Big Data play a role in your Customer Service/Engagement strategy in the next 2 years?

- a. Yes
- b. No
- c. Uncertain

10) Is your company currently collecting data on your consumer's preferred channels and/or technologies for Customer Service/Engagement?

- a. Yes
- b. No
- c. Uncertain

11) Please rate on a scale of 1 to 5 (1 being Not Important and 5 being Top Priority) the use of data analytics from the following sources as a part of your Customer Service/Engagement strategy through the next 2 years.

- a. Billing/Customer Information Systems (CIS)
- b. Smart Metering
- c. Home Energy Management Systems (HEMS)
- d. Social Media
- e. Apps
- f. Website

12) Do you think Millennials will be a priority consumer demographic for utility Customer Service/Engagement through the next 2 years?

**Millennials are defined for our purposes as persons born between the early 1980s and early 2000s.*

- a. Yes
- b. No
- c. Uncertain

13) Does your company have a strategy, or will have strategy in place in the next 2 years, for Customer Service/Engagement tailored to Millennials?

- a. Yes
- b. No
- c. Uncertain

14) What data resource(s), if any, is your company using to measure Customer Service/Engagement preferences amongst Millennials specifically?

- a. Billing/Customer Information Systems (CIS)
- b. Home Energy Management Systems (HEMS)
- c. Social Media
- d. Apps
- e. Website

- f. Other (Fill in the Blank)
- g. Not currently measuring/tracking
- h. Uncertain

15) Which of the following services does your company provide? Check all that apply.

- a. Electric
- b. Natural Gas
- c. Water
- d. Other (please specify)

16) Is your retail electric service deregulated?

- a. Yes
- b. No

17) Please select the type of Utility you work for.

- a. Municipal Utility
- b. Public Irrigation District / Public Utility District
- c. Rural Electric Cooperative Utility (REMC)
- d. Federal / Crown Utility
- e. State / Provincial Utility
- f. Investor Owned Utility
- g. Competitive Energy Retailer
- h. Other (please specify)

18) How many customers' accounts does your utility serve?

- a. Under 100,000
- b. 100,000–500,000
- c. 500,000–1million
- d. 1 million–3 million
- e. Over 3 million

19) Please indicate what geographical region you are located in.

- a. North America
- b. South / Central America
- c. Asia

- d. Africa
- e. Europe
- f. Russia
- g. Middle East
- h. Australia

20) Please indicate your job role.

- a. C Level / Executive
- b. Director / Senior Manager
- c. Manager / Supervisor
- d. Analyst / Senior Analyst
- e. Engineer / Senior Engineer
- f. IT
- g. Other (please specify)



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