CIS: Meeting Today's Need for Low-Cost Implementations

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A customer information system (CIS) is the core business application allowing utilities to service their customers. Many utilities in North America are still working with legacy custom-built systems or systems that were replaced or updated as part of Y2K. These systems are ripe for replacement, given advances in underlying technology, changes in regulations, acquisitions, the need to accommodate new pricing structures, and retirement of the workforce supporting legacy systems. Given the number of business processes, including customer self-service, that the CIS supports, it is important that utilities have a basis to judge level of effort and costs to determine whether they are ready to embark on such an initiative and, if so, how they can manage toward successful implementation.

This white paper examines the attributes associated with today’s CIS implementation. It is based on case studies with utilities that have recently implemented a new CIS or made a major upgrade. We examine the overall costs, external and internal, and time to implement and compare utility efforts to arrive at a benchmark. Guidance is provided for utility companies considering CIS initiatives on how to become more efficient at implementation so that they can benefit from the increased functionality and flexibility of a new system or major upgrade and do so at a lower cost.

Findings of this study revealed that:

- Today's CIS implementation costs have decreased. The price per customer is now lower — averaging $42.81 per customer versus a commonly cited range of $60-75 per customer. This is good news for utilities.
- Software and hardware costs are lower than internal and external labor costs. Total CIS labor cost (external professional services and internal project staffing) consumes 86.5% of total expenditures (including hardware, software, services, and in-house labor).
- The effort of implementing a new CIS is rewarded with greater call center efficiency, improved customer experience with utility, revenue assurance, lower total cost of ownership, increased accounting accuracy, employee efficiency, and the ability to offer new products and services.
SITUATION OVERVIEW

Over the past 10 years, IDC Energy Insights has conducted surveys with North American utilities, asking them to provide their buying intentions for customer care and billing systems in the coming year. Very consistently, 25-35% of utilities said that they are considering, researching, or planning to invest in customer care and billing systems in the coming year but may not actually make major investments, leaving them behind in enabling functionality and reducing the cost of supporting existing systems. The buying intentions expressed by utilities in 2014 show that they are again putting CIS on the agenda (see Figure 1). 33% of utilities said that they will be researching (7.1%) or purchasing (11.1%) customer care and billing systems or investing in upgrades (15.4%) to their customer care and billing systems in 2015. This percentage increases in 2016 to 44.4% of utilities taking action – with 12.4% of utilities researching, 9.3% purchasing customer care and billing systems, and 22.5% investing in upgrades to their customer care and billing systems.

FIGURE 1

Intentions for CIS

Q. Looking ahead to 2015 and 2016, which statement will best describe your organization’s strategy for each of the following solution areas?

<table>
<thead>
<tr>
<th>Option</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will purchase for the first time</td>
<td>14.4</td>
<td></td>
</tr>
<tr>
<td>Will purchase to replace an existing solution</td>
<td>9.3</td>
<td>11.1</td>
</tr>
<tr>
<td>Will invest in enhancements/upgrades</td>
<td></td>
<td>15.4</td>
</tr>
<tr>
<td>Plan to extend use to another area of the business</td>
<td>2.5</td>
<td>8.3</td>
</tr>
<tr>
<td>No addition – only paid maintenance</td>
<td></td>
<td>12.4</td>
</tr>
<tr>
<td>Researching/evaluating purchase of solution</td>
<td>7.1</td>
<td>12.4</td>
</tr>
<tr>
<td>Staying with our homegrown system</td>
<td></td>
<td>10.8</td>
</tr>
<tr>
<td>Will not evaluate this solution for purchase</td>
<td></td>
<td>9.9</td>
</tr>
</tbody>
</table>

n = 35

Source: IDC’s Vertical IT and Communications Survey, 2013 and 2014
The decision to make major changes to the CIS is driven by multiple factors. Utilities in North America are still working with legacy custom-built systems running off a mainframe. From the standpoint of both "efficiency" and security (and cybersecurity, in particular), legacy systems create more liabilities over time. Also, with an aging workforce that will require replacement over the coming few years, these legacy applications and systems increasingly become a concern in terms of both attracting and hiring new employees and the knowledge of those systems that is retiring. If a utility does have an older packaged application to support customer care and billing, that system was likely implemented during the move to Y2K. If a utility has not made major changes to its CIS since Y2K, it is missing out on important advancements in technology. The CIS of today offers greater functionality, improved data security, better transaction processing speed, improved user interfaces, and greater access to data. Improved integration results in a lower cost of support.

Utilities are motivated to change out their systems in order to standardize across multiple service territories or acquisitions to a common application infrastructure. Other utilities need their systems to accommodate new pricing structures, such as net metering, dynamic pricing, and demand response, or to adjust to the implementation of smart meters and advanced metering infrastructure (AMI). Finally, there is motivation to invest in CIS to keep up with the changes that customers are experiencing. Consumers today are "always on" and "always connected" to their financial services firms and retailers — and they are coming to expect that of all relationships with their suppliers. The CIS has to be able to address the new customer experience.

Many positives result from updating the CIS; however, despite the best intentions, barriers that restrict utilities from making the move still exist. The level of effort required to implement a CIS is second only to an investment in an ERP system. The CIS touches the customer service, accounting, field services, planning, marketing, metering, and regulatory groups within the utility as well as the customer via self-service. If a utility has not updated business processes, the CIS can seem like a daunting, but necessary, move. Perceptions are that the cost per customer ranges from $60 to $75. With tighter IT budgets expected and a degradation of utility revenue, cost pressures are great.

FINDINGS

To understand the IT investment-related costs of utility CIS software implementation and licensing, determine average costs and factors that drive costs higher, and provide insight into strategies that reduce cost factors, IDC Energy Insights conducted a benchmarking study of 10 North American utilities out of a population of 30 North American utilities that have implemented new or major CIS applications from 2012 to the present. The study involved investor-owned utilities (IOUs) and municipals; electric, water, gas, and combination utilities; and medium-sized and large utilities (for additional details on the methodology and firmographics, see the Appendix).
Most utilities in this study cited the need for new functionality as a motivation for the CIS initiative (see Figure 2). More functionality in general was mentioned, along with the need to support advanced metering infrastructure or new rate structures for solar and other distributed energy resources. Outmoded systems were also a motivation for replacement. In some cases, legacy systems require skills that may be scarce in a utility’s service territory. Yet in other cases, the vendor was no longer supporting the application. Interviewees indicated that highly customized legacy systems were difficult to maintain, especially if the other applications integrated into the CIS are being changed.

FIGURE 2

Reasons for CIS Initiative

<table>
<thead>
<tr>
<th>Reason</th>
<th>(% of respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need new functionality, AMI support, and new rates</td>
<td>70</td>
</tr>
<tr>
<td>Outmoded technology, no longer supported</td>
<td>60</td>
</tr>
<tr>
<td>Standardization and consolidation</td>
<td>30</td>
</tr>
<tr>
<td>High TCO of existing system</td>
<td>20</td>
</tr>
<tr>
<td>To gain business efficiencies</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: IDC Energy Insights, 2015

The Total Cost of Implementing a CIS Has Decreased

The price per customer is now lower — averaging $42.81 per customer versus a commonly cited range of $60-75 per customer as recently as 2014. This is good news for utilities. For this study, respondents were asked to detail the total costs of their CIS initiative, including internal labor costs, external services, and hardware and software. Care was taken to isolate the costs of CIS when it was part of a larger IT initiative including other application or system investments.

Table 1 displays the range of costs for the CIS, a range which is quite broad. Projects ranged from $16.98 to $64.34 per customer. Table 1 also breaks out average external costs per customer and internal and external labor costs and provides average implementation time for all interviewees by ownership and size of utility and by project complexity.
TABLE 1
Benchmarking CIS Initiative Costs

<table>
<thead>
<tr>
<th></th>
<th>Total Cost per Customer ($)</th>
<th>External Cost per Customer ($)</th>
<th>Internal + External Labor Cost per Customer ($)</th>
<th>Average Time to Implement (Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>42.81</td>
<td>32.23</td>
<td>33.47</td>
<td>23.50</td>
</tr>
<tr>
<td>Medium sized (&lt;1 million customers)</td>
<td>42.72</td>
<td>32.92</td>
<td>35.02</td>
<td>22.40</td>
</tr>
<tr>
<td>Large (&gt;1 million customers)</td>
<td>43.15</td>
<td>29.47</td>
<td>26.98</td>
<td>28.00</td>
</tr>
<tr>
<td>Investor-owned utilities</td>
<td>40.83</td>
<td>31.61</td>
<td>27.96</td>
<td>22.60</td>
</tr>
<tr>
<td>Municipals</td>
<td>44.12</td>
<td>32.64</td>
<td>37.14</td>
<td>24.10</td>
</tr>
<tr>
<td>Complex</td>
<td>38.60</td>
<td>28.34</td>
<td>32.59</td>
<td>24.40</td>
</tr>
<tr>
<td>Standard</td>
<td>45.19</td>
<td>35.66</td>
<td>36.59</td>
<td>21.30</td>
</tr>
<tr>
<td>High/low values (all)</td>
<td>64.34/16.98</td>
<td>55.02/9.13</td>
<td>56.10/10.59</td>
<td>30.5/14.2</td>
</tr>
</tbody>
</table>

Note: The table displays findings of 10 case studies out of a total population of 30 North American utilities implementing CIS since 2012. Use caution when evaluating small numbers.

Source: IDC Energy Insights, 2015

Software and Hardware Costs Are Lower than Labor Costs

As we dig further into the costs of a CIS initiative, it is clear that labor makes up a significant portion of costs. When total CIS labor costs (external professional services and internal project staffing) are considered, CIS implementation consumes 86.5% of total expenditures. External services are a substantial portion of the CIS project, averaging 57.6% of total CIS-only related costs.

Internal costs may be underestimated because stakeholders (marketing, customer services, accounting, field services, etc.) may participate in design, testing, and training but may not be included in the budget. The internal labor costs that typically show up in the budget for these projects are program management and IT staff. The time to implement a CIS from contract signing to go-live is notable. Implementation times for utilities in this study averaged close to 24 months, ranging from 14.2 months to 30.5 months. 24 months is at the high end for other major packaged application implementations. Longer implementation time means more labor costs (variable) are accrued compared with hardware and software costs (fixed). In fact, over half of the utilities reported projects that ran past the go-live milestone. The CIS initiatives of half of the utilities were over budget.
**Solid Business Case Associated with Lower Costs**

A business case for CIS was the rule rather than the exception. 6 out of 10 utilities developed a business case to justify their investment to internal leadership. Municipals typically presented the case to city councils or government boards. Investor-owned utilities submitted to a capital expenditure approval committee and/or board of directors. Surprisingly, most investor-owned utilities did not detail CIS costs as part of a rate case; rather, they included CIS costs with overall capital expenditures, keeping the detail to support their arguments, if questioned. In some cases, utilities planned to seek rate case relief at a future date.

Going through the due diligence of constructing a business case does not guarantee that a project will come in on time or on budget. The business case needs to be well constructed and costs must be well researched. One utility that was able to implement the CIS on time and on budget and at a relatively low cost per customer had made a solid case. According to one interviewee, “The business case, really, was a summary of our customer service goals – what we could do to achieve them with this program initiative that included a large technology exchange, a set of cost savings, an overall net income or earnings per share calculation, and a deployment plan. That was the package that we called our business case that we put in front of the executive committee and ultimately shared with the board of directors that led to the project approval.”

**Standalone CIS Implementations Are Not Low Cost**

Surprisingly, utilities that embarked on CIS implementations that were not part of a larger project came in on the high end of the cost-per-customer range. It could be argued that a standalone project would likely get more focused attention and resources. Instead, where the CIS was part of a broader project, including asset management and meter data management, 4 out of 7 projects came in at the low end. It could be that the larger projects force more discipline, including a program management office to guide and coordinate activities.

There were no other clear predictors of high or low cost per customer in the study. In part, this is due to the small sample size. Economies of scale do not appear with this group: The utilities with the largest number of customers served by the CIS – 1+ million customers – were on the high end and low end of cost. There is little association with utility ownership type (IOU or government) and cost.
**Effort Is Rewarded**

4 out of 5 (80%) utilities have realized benefits. The remaining utilities have not conducted an assessment because of recent implementations but will in the future. According to one utility, "The biggest one [benefit] is the use of a customer portal [presenting CC&B data], which we did not always have before. The ability for our customers to go online and see their usage is really great. We have a customer payment center here, and we do have a lot of people that actually like to come in and pay, but because the portal is kind of really easy to use, I think it has increased our customers' interest to go online and use that as a payment method rather than coming in or mailing their payment or whatever they've done before. That is really a benefit for us and for them."

Benefits depend ultimately on the pre-implementation state of utility processes and systems. For example, existence of AMI and integration to CIS increased efficiency of move in/move out. In other cases, highly manual processes were replaced with automation, bringing a benefit that other utilities had already achieved.

Both hard benefits and soft benefits were realized. Table 2 displays those benefits most frequently mentioned.

**TABLE 2**

<table>
<thead>
<tr>
<th>Type of Benefit</th>
<th>Benefit</th>
</tr>
</thead>
</table>
| Hard            | • Associated with monetized benefits  
|                 | • Reduced truck rolls  
|                 | • Call center efficiency (reduction in call volumes, increase in first-call resolution)  
|                 | • Revenue assurance (reduced theft, quicker move in and move out)  
|                 | • Lower total cost of ownership (easier integrations, reduced IT support staff, virtualized equipment)  
|                 | • Increased accounting efficiencies (quicker analysis)  
|                 | • Employee efficiency (reduction in training time) |
| Soft            | • Indirect benefits  
|                 | • 360-degree view of the customer  
|                 | • Improved customer convenience (portal, online payment, visibility to consumption)  
|                 | • Improved access consumption and account data  
|                 | • Enables new functions related to AMI (move in and move out, prepay) |

Source: IDC Energy Insights, 2015
CONCLUSIONS

Prior to this study, the utility industry had cited CIS project costs of $60-75 per customer. However, these casually cited costs run the risk of misleading utility business planners and IT system budget owners when the context is removed.

In this IDC Energy Insights study, we found that the average CIS cost per customer is in the mid-$40s. Low-cost projects fall well below the sub-$20 threshold. This is 30-70% less than commonly accepted estimates that are at or above $60 per customer. Most importantly, the findings demonstrate that total project costs are to a large extent within a utility’s control.

Planning is an imperative and an activity that generally yields lower costs. Planning activities are multifaceted but, at a minimum, will be guided by the following findings:

- The shorter the implementation time, the greater the likelihood a utility will need to rely on external services. External services are multiples more costly than internal labor.
- Lean internal staffing can lead to delayed decision making and work stoppages, especially when there are no contingency plans.
- Simultaneous system upgrades or implementations complicate system testing, user acceptance testing, and data quality assurance. These standard required activities are at risk of becoming bottlenecks in meeting deployment schedules.
- Custom feature development can have an especially egregious result that rears its head during test plan execution. More importantly, custom development adds to labor costs and leads to difficulty in upgrading and support.
- Locking down project objectives and system enhancements, as well as preventing scope creep during the implementation phase(s), is essential to meeting project management schedules and mitigating the overall risk of cost overrun.
- Working with "low cost" professional services firms will neither guarantee low cost nor ensure positive results. However, a high-cost professional services firm can also destroy a business case. It behooves the utility to err on the side of ample planning that includes the rigor of developing a business case, one that is led by the utility and supported by the technology vendor(s).

RECOMMENDATIONS

A customer information system is the core business application allowing utilities to service their customers. Many utilities in North America are still working with legacy custom-built systems or systems that were replaced or updated as part of Y2K. These systems are ripe for replacement, given advances in underlying technology, changes in regulations, acquisitions, the need to accommodate new pricing structures, and retirement of the workforce supporting legacy systems. Given the number of business processes, including customer self-service, that the CIS supports, it is important that utilities have a basis to judge the level of effort and costs to determine whether they are ready to embark on such an initiative and, if so, how they can manage toward successful implementation.
Build a Strong Business Case

The utilities that had successful CIS implementations had a strong business case going into the project. The business case was used to provide justification for the project and served as a guide to keep the project on target by providing clear guidance on project objectives.

- Development of the business case should include all relevant parties. Many stakeholders have an interest in the CIS. Customers want systems that will be easy for them to use, whatever their preferred method of interaction with the utility; customer service wants to enhance customer satisfaction while controlling the cost to serve; accounting wants to be able to do timely and accurate billing; marketing wants to be able to reinforce a positive customer experience and target relevant programs to customers; regulatory affairs wants to be able to meet regulatory requirements for rate case development and reporting and also needs to be involved in guiding the development of a case for cost recovery, if relevant; field service wants to be efficient at addressing customer inquiries; and so on. These parties should be involved in the development of the business case.

- Cost identification helps make the case and manage implementation. Internal costs will need to be considered in light of regulatory treatment and use of resources allocated to other funded projects. External costs, particularly services costs, should serve as a reference point for later implementation. There are bound to be requests for changes midproject, and allowances for some changes must be built into the case, not added later.

- Hard benefits are a must for the business case. There is ample evidence of the hard benefits that have been achieved. While these benefits may be achieved in conjunction with other systems, they should be associated with the CIS. Make a value assessment of soft benefits, including societal benefits.

- Project risks should be assessed and contingency plans developed. Part of assessing the risks is to have a complete understanding of what other projects in the utility may impact the CIS implementation, the rollout of AMI by a certain deadline, or a decision to implement mobile workforce for field services. Awareness of expected regulatory actions is important as well. Major regulatory decisions typically take months, if not years, so a utility should have insight into what decisions may be coming up during the prospective project timeline and be able to develop a contingency plan.

Align the Organization for Execution

- In addition to IT, planning should involve customer service, marketing, and field services employees as key business personnel driving requirements. Seek personnel who have a firm understanding of where the business needs to go. In this approach, you will want to challenge current thinking and bring future requirements to the foreground. It is critical to be disciplined on maintaining zero scope creep during execution.

- Executive sponsorship is a must, but an understanding of the project and a commitment to support the project through post-implementation are important. Post-implementation includes ongoing training and the critical business process changes that are the most difficult to make. The challenge is that business process change entails a realigning of resources and its inevitable impact on involved organizations and staffing.
Utilities should determine as early as possible the extent to which they are willing and able to staff the project with internal resources. The cost of professional services firms is often the impetus for making a decision, but that can be a source of delay if the utility decides to go it alone. Identifying contract personnel or hiring into new positions takes time to ramp up, especially if key positions require seasoned candidates.

**Balance CIS Features and Technology**

- In selecting a CIS vendor solution, using a checklist of features and a robust road map is an alluring approach, if not a solid starting point. However, the utility needs to examine the underlying technology of the application and capabilities for integration as well as the associated accelerators to successfully implement and manage the solution. Without these, the project will cost more to complete, take longer than necessary to implement, and, in the long term, increase the cost to support the system and the involved business groups. With the same objective in mind, utilities will want to severely limit CIS customizations at least for the initial implementation and standing up the system. When possible, use off-the-shelf features and functionality as long as the essential business process restrictions that could emerge are limited in scope. Again, having an appropriate balance of scope and cost to support the business case is a key objective.

- The vendor selection should be partly based on the rapid implementation tools and methodologies available, especially for data migration and integration. A common stumbling block is migrating data out of homegrown and legacy CIS. Tools that will do all or the majority of the implementation work become more important for utilities that do not have the benefit of a professional services firm's custom tools. Utilities will be well served to have access to well-tested, preconfigured templates based on utility type and ownership. To validate, reputable vendors will supply referenceable customers with project implementations in the past two years. Be sure to discuss with both lead IT engineers and project management.

**Work with Professional Services**

- All utilities in this study contracted professional services to work on at least a portion of the project work, whether provided by the CIS vendor's services or outside IT professional services firms. Utilities can help themselves contain costs and ensure a mainly trouble-free project. Besides demonstrating requisite experience in the design and implementation of the CIS of choice, utilities need to look for a strong bench. Professionals with experience in transitioning from your current billing system to the new CIS are a good base. Integration and systems testing that can handle new business process design are imperatives. Well-tested, preconfigured templates for the CIS product of choice leverage best practices from the field.

- Professional services firm staff turnover during the project is not uncommon. To mitigate schedule disruptions and quality issues, utilities will be well served to evaluate a firm for its ability to apply a mature knowledge transfer process between the professional services firm and the utility throughout the project. The objective, being prepared for the unexpected, will likely happen, and the outcome is to reduce disruption, not completely foretell every possible risk. Part of the planning process is to conduct scenario planning and build subsequent contingencies into the contract to protect the utility.
APPENDIX

Methodology

This study relies on a combination of primary and secondary research and analyst experience over the course of 15 years. Secondary research included a review of relevant articles in trade publications and examination of grant applications and regulatory proceedings. Press releases were reviewed to identify utility companies initiating CIS replacements or upgrades. For primary research to produce case studies, in-depth interviews were conducted with 10 North American utilities with recent major CIS initiatives; standard upgrades were not included. In preparing for this study, IDC Energy Insights identified a total population of 30 utilities in North America with major CIS initiatives since 2012. Respondents were recruited from the total population. Thus, the study covered one-third of CIS initiatives in North America. The utilities interviewed for this study include water, electric, gas, and combination. Ownership type included investor-owned and municipal utilities ranging in size from 116,000 customers to 3 million customers.

A cost-per-customer metric was developed for comparison where we:

- Isolated CIS costs from larger initiatives, where applicable
- Identified CIS internal (staff resources) and external (hardware, software, and services) costs
- Based the customer number on customers served, which was standard among utility interviewees

That said, there were challenges where the utility was reluctant to provide detailed information on all costs because of regulatory reporting, necessitating a few estimates.
Table 3 shows a sample project cost calculation to illustrate the methodology.

**TABLE 3**

<table>
<thead>
<tr>
<th>Figures</th>
<th>Details</th>
<th>As a %</th>
<th>Example Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total project cost (CIS + other)</td>
<td>Most projects involve more than CIS. Non-CIS costs need to be stripped out of calculations.</td>
<td></td>
<td>$10,000,000</td>
</tr>
<tr>
<td>CIS project cost</td>
<td>CIS costs can be actual or a percentage of the total project cost (estimated by a person with budget knowledge).</td>
<td>70</td>
<td>$7,000,000</td>
</tr>
<tr>
<td><strong>If incurred, cost overages are added to CIS project share.</strong></td>
<td>(CIS cost + budgeted overages) =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal costs</td>
<td>(CIS project costs – external costs) = internal labor costs</td>
<td>80</td>
<td>$1,400,000</td>
</tr>
<tr>
<td>External costs</td>
<td>(CIS costs X percentage of external costs) or actual</td>
<td>80</td>
<td>$5,600,000</td>
</tr>
<tr>
<td>Software (% or actual)</td>
<td>(External cost X percentage of software cost) or actual</td>
<td>17</td>
<td>$950,000</td>
</tr>
<tr>
<td>Hardware (% or actual)</td>
<td>(External cost X percentage of hardware cost) or actual</td>
<td>6</td>
<td>$340,000</td>
</tr>
<tr>
<td>Service (% or actual)</td>
<td>(External cost X percentage of service cost) or actual</td>
<td>77</td>
<td>$4,310,000</td>
</tr>
<tr>
<td>Customer base</td>
<td>Used as divisor for per-customer cost</td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td>Total cost per customer</td>
<td>(CIS project / customer base)</td>
<td>NA</td>
<td>$14</td>
</tr>
<tr>
<td>External cost per customer</td>
<td>(External costs / customer base)</td>
<td>NA</td>
<td>$11.20</td>
</tr>
<tr>
<td>Internal + external labor cost per customer</td>
<td>(Internal + external labor cost / customer base)</td>
<td>NA</td>
<td>$13.60</td>
</tr>
</tbody>
</table>

Source: IDC Energy Insights, 2015

A series of factors influencing costs was identified:

- CIS as part of a larger project with other new application implementations
- Number of integrations
- Business process changes associated with CIS
- External conditions and changes, such as new regulations
- Utility size
- Utility ownership

CIS vendors covered in this study include Cayenta, Oracle, and SAP.
**Firmographics**

Figures 3-5 describe the firmographics of the utilities that participated in this study. Table 4 lists the roles of the respondents.

**FIGURE 3**

Utility by Type

Source: IDC Energy Insights, 2015

**FIGURE 4**

Utility by Ownership

Source: IDC Energy Insights, 2015
FIGURE 5
Utility by Customer Size

Source: IDC Energy Insights, 2015

TABLE 4
Respondent Titles

<table>
<thead>
<tr>
<th>VP, Customer Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, Customer Service</td>
</tr>
<tr>
<td>Director, Customer Service Systems</td>
</tr>
<tr>
<td>VP, IT</td>
</tr>
<tr>
<td>Chief Corporate Services Officer</td>
</tr>
<tr>
<td>Manager, Business Systems</td>
</tr>
<tr>
<td>Manager, Business Systems</td>
</tr>
<tr>
<td>CIO</td>
</tr>
<tr>
<td>Project Manager, IT</td>
</tr>
<tr>
<td>Superintendent</td>
</tr>
</tbody>
</table>

Source: IDC Energy Insights, 2015
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