

Use of Data Analytics and Innovative Partnerships in Utility Retro-Commissioning Program Expansion

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ABSTRACT

By 2014, ComEd's Smart Ideas For Your Business retro-commissioning (RCx) program had completed 180 projects, saving customers 110 million kWh and over three million therms. However, these projects were almost entirely limited to very large buildings; average project size exceeded 600,000 square feet. In order to expand the program to include smaller buildings, a number of obstacles needed to be overcome. Any new RCx offer would require a reduced cost structure to compensate for the lower availability of energy savings at smaller buildings, and a pilot program testing a number of strategies toward that goal was conducted. But the more significant challenges were in marketing and customer engagement. ComEd not only needed to build general market awareness for a customer segment which had never been targeted by the RCx program, but also had to get buy-in from hard-to-reach building owners, managers, and engineers with extremely limited human and financial resources to devote to energy efficiency. To that end, ComEd partnered with an energy analytics firm to use half-hour interval electric usage data to identify buildings with high operational savings potential. A second company was engaged to provide over-the-phone energy assessments used to screen large numbers of high-potential customers, and a third firm performed dedicated outreach to managers of portfolios of small commercial buildings. Finally, data visualization tools were employed to help customers quickly understand the potential for energy and cost savings through RCx. Through these efforts, over 90 new projects were generated in the first four months following program launch.

Introduction

Since its launch in 2008, ComEd's retro-commissioning program has been very successful in generating electric and natural gas energy savings for its participants. By the end of the program's seventh year in June 2015, RCx had been performed at over 200 facilities across northern Illinois, ranging from iconic skyscrapers and museums to hospitals and universities, generating over 130 million kWh and almost 4 million therms in energy savings.

A common theme of those projects was the large size of the participating buildings, which averaged over 600,000 square feet. The original ComEd RCx project framework, which includes five project phases, three extensive reports and engineering reviews, and typically takes a year or longer to complete, was developed with such buildings in mind. However, there are relatively few buildings in the ComEd territory large enough to be retro-commissioned cost-effectively using that program design, even when including Chicago's dense downtown. While buildings continue to sign up for this offer, the volume of new projects has decreased the last two years as market penetration has increased.

In anticipation of that decrease, work began in 2014 to create strategies for new RCx offers that could cost-effectively allow smaller buildings to participate. The market potential

was clear; ComEd has approximately 25,000 commercial and industrial customers with peak demand of at least 100 kW, occupying over 2 billion square feet. Other than the largest several hundred (which were best suited for the original RCx offer), this group had never been offered any ComEd incentives for optimizing their building operations.

There were two main reasons smaller buildings were not targeted with the original RCx offer; such buildings offered lower potential energy savings, and typically had fewer human and financial resources to devote to optimization of building performance. Any new offer or offers would need to be lower in cost to maintain overall cost-effectiveness for the program while obtaining a lower amount of savings, and would need to take into account the specific needs of customers in smaller buildings.

In order to better understand the energy savings potential and the characteristics of the customers being targeted, a pilot RCx program for smaller buildings (defined as less than 150,000 square feet) was conducted in 2014 and early 2015. The goal of the pilot was to gain a better understanding of the needs of this building segment, and to evaluate various strategies for gaining the attention of customers and motivating them to participate in the program. Data was also collected to confirm assumptions about the availability of operational savings in the target buildings, and to evaluate the cost-effectiveness of potential program designs.

In the pilot, 90 buildings were analyzed using a whole-building energy model that utilized interval electric usage data and weather trend information along with commercially available data about the building (size, business type, large HVAC equipment visible from outside the building, etc.) to remotely identify opportunities for energy-saving operational improvements and retrofits. Outreach was then conducted to the buildings, and interested customers were presented with energy-saving recommendations, along with easy-to-understand charts and graphs to help demonstrate the potential savings.

The pilot concluded in February 2015, and demonstrated that operational savings were indeed obtainable; participating buildings achieved savings of 115,000 kWh on average (over \$8,600 at 7.5 cents per kWh), representing a reduction of about 8% of their electrical consumption. Significant insights into the needs of this customer segment were also identified. In particular, any new RCx offer for smaller buildings would need to focus on three main areas:

- *Low-cost, simpler program design:* Customers in the targeted building segment had extremely limited time and financial resources to devote to an RCx project. To be successful, the new offer would need to have a short project life cycle, require little or no financial commitment from customers, and place minimal demands on customer staff time.
- *Incorporation of analytics:* Data visualization tools such as demand heatmaps proved to be extremely valuable in customer engagement. Providing easy-to-understand charts and graphs of energy usage over time helped both engineers and property managers/owners quickly understand opportunities for optimizing energy use, particularly those related to scheduling of equipment. These tools also provided credibility to the program by demonstrating a thorough understanding of the building during initial conversations with customers. Finally, analytics would be very useful in segmentation and targeting of potential participants.
- *Aggressive targeted marketing:* Repeated e-mails and phone calls as well as direct mails were used in the effort to enroll customers in the pilot. Of the 90 customers

originally targeted, only 20 agreed to participate in an initial web meeting, and 10 actually completed a project. Awareness of the ComEd RCx offer was low in this new segment, and buildings would need to be strongly committed to projects up front so that program resources would not be wasted. A broad, multi-pronged marketing strategy would be needed to drive participation above minimal levels.

New Program Design

The need for simplicity and lower levels of customer commitment in any successful RCx offer for smaller buildings was evident. Buildings typically have staff and financial resources corresponding to their size; as building size decreases, the time building operators have to devote to optimizing building operations and the budgets available for RCx usually decrease as well.

In 2014, ComEd introduced a new RCx offer, called RCxpress, to serve mid-sized buildings between 150,000 and 400,000 square feet in size. In essence, RCxpress was a scaled-down version of the original large-building offer, which provided an RCx study conducted by a ComEd-approved retro-commissioning service provider (RSP) to the customer. The value of the study could be up to \$100,000 or more for very large buildings, and was provided at no charge as the program incentive. In exchange, the customer would commit to funding implementation of agreed-upon operational improvements with combined simple paybacks of 18 months or less, which typically included measures such as equipment scheduling, economizer optimization, and adjustment of various equipment setpoints.

In order to reduce program costs, the study portion of RCxpress leveraged experience collected by the large-building RCx program over the years; for a given building type, the most likely operational improvements could be predicted in advance based on past RCx projects in similar buildings. Therefore, the scope of the RCxpress study was limited to looking for those likely-to-be-found measures – a “Top 10 list” of energy savings opportunities. This allowed significant cost savings to be achieved and made projects cost-effective from the program’s standpoint despite lower energy savings due to the smaller building size. Reporting requirements and the number of project phases were also reduced, shortening the project life cycle.

From the customer standpoint, less meetings and staff time were required, and the required financial contribution was reduced (from \$15,000 or \$30,000 to \$5,000 or \$8,000 depending on project size). The end result was an offer very similar to the pre-existing program, but streamlined. In its first year, the RCxpress option generated 15 projects, with average savings of 172,000 kWh.

However, the small-building RCx pilot discussed above had very clearly demonstrated the lack of resources available to customers in buildings below 150,000 square feet in size. Asking those customers to commit to even a minimal amount of spending on implementation of operational improvements proved to be a deal-breaker for most, as did anything other than minimal demands on staff time. The reduced level of commitment used in RCxpress for mid-sized buildings would not be enough to overcome the barriers to participation faced by the smaller building operators.

Several steps were taken to make the new RCx offer (to be named RCx Building Tune-Up) feasible to its intended customer base. The cost-effectiveness hurdle was addressed in part through additional reductions in project scope (limiting the investigation from a “Top 10 list”

to a smaller number of measures, as dictated by building type), requiring the use of standard calculators to quantify savings vs. more expensive customized engineering calculations, and further reducing meeting requirements - for example, using web meetings instead of onsite meetings. In addition, reporting requirements were again lessened, and measurement and verification methods were reduced in technical sophistication.

The new offer also incorporated authorization for the RSP to immediately implement agreed-upon operational improvements during their initial site visit as part of the program application. This “find and fix” approach removed the need to gain formal approval for implementation from management later in the project (a cause of frequent delays and added costs in the original RCx program design), and reduced or eliminated the need for implementation in later site visits; the building engineer or facility manager could go ahead and authorize action on the spot.

In general, by focusing on the few operational improvements most likely to generate savings, such as equipment scheduling, and getting permission in advance to make changes to building operations as they were identified rather than meeting to discuss them first, the time spent on site by both customer and engineering service provider could be kept to a minimum, substantially reducing costs.

All of these changes made it possible to maintain cost-effectiveness from the ComEd perspective while eliminating a major barrier to customer participation - the requirement for a financial contribution. Since individual project costs were very low, and only a couple low-cost measures would typically be implemented, the offer incentive was expanded to cover implementation costs. That meant that customers would be required to provide only staff time and access to facilities in order to participate in the program (which obviously made it much easier to gain management approval in advance). In order to increase the overall project value, the single report delivered to the customer also identified opportunities for other energy-efficient equipment upgrades and retrofits, and the available ComEd incentives from other programs.

From the customer perspective, the pilot clearly demonstrated how difficult it would be to attract interest in the new offer. As mentioned previously, of the 90 buildings targeted with the initial offer in the pilot, only 20 agreed to a meeting, and only 10 followed through with a project, despite significant efforts to engage them all.

Incorporation of Analytics

Customer Segmentation

Efforts to develop a comprehensive strategy for marketing of the new RCx Building Tune-Up offer began with segmentation of the potential customer base. During the previous few years, ComEd had deployed CRM tools to support its energy efficiency efforts targeting business customers, enabling the addition of data such as business type and size, organizational contacts, and square footage to the relatively minimal customer information (often only billing contact information and usage/peak demand) kept until that time. Using the CRM platform, a range of options were available; factors such as building size, business type (for example, office buildings, multi-family facilities, or retail outlets), or past participation in ComEd programs could be used to tailor messaging and engagement strategies.

The availability of half-hour interval usage and demand data also offered tremendous

potential for customer segmentation. ComEd's historical practice had been to install meters capable of recording half-hour interval usage data for all customers with peak demand larger than 100 kW. To take maximum advantage of those data, to educate customers on their energy usage, and to drive energy-saving behaviors, ComEd partnered with Agentis Energy to create the Business Energy Analyzer (www.ComEd.com/BEA). Launched in 2013, the BEA not only provides customers with access to their usage data, but also provides a wealth of analysis to help them use those data to become more energy-efficient. Upon logging into the BEA, customers can view the following:

- Energy usage over time, and comparisons of usage against earlier time periods
- Comparisons of energy usage vs. similar buildings and business types
- Demand heatmaps and other visualizations of usage trends

Customers also have the option of entering data about their business, their energy-using building systems, and their operating practices. That information is entered into a load disaggregation engine which provides additional visibility into how energy is used; the more information provided, the more accurate the disaggregation estimates. Finally, the BEA uses all this information to provide customers with recommendations for energy-saving equipment retrofits and improvements in building operations, along with estimates of the energy savings and associated cost savings that would result from implementing the recommendations.

Identification of High-Potential Customers

All available interval usage data had been loaded into BEA for launch, allowing Agentis to develop methodologies for screening the load profiles of the whole > 100 kW peak demand customer base for good candidates for energy efficiency projects. In the case of the RCx Building Tune-Up, three strategies were employed to create lists of customers for more detailed analysis. The first of these was straightforward; buildings which showed an increase in usage year over year that was larger than that seen in other buildings in their peer group (other restaurants, for example) were flagged. While case-by-case factors could obviously contribute to increased usage, this method was a useful way to highlight potential good candidates within various segments.

The second method for identifying high-potential customers focused on shutdown analysis, or determination of missed opportunities for energy savings during non-occupied hours. The operating schedules (open hours) for each building were estimated by identifying regular periods of low usage and assuming these hours were when the business is closed. From there, a shutdown metric was defined as the reduction in energy use from average open hour to the average closed hour. This metric was then compared with peer benchmarks across each business type, allowing poor performers to be identified.

The third strategy focused on building responses to hot weather events. A regression analysis was used to estimate each building's response to hot weather, and in particular the percentage of total energy usage used for cooling. As in the other methods, the metric was compared against similar buildings to identify poor performers within each business type.

Use of Data Visualization Tools for Customer Engagement

One of the key learnings from the pilot was that customers in the small-building segment had very limited time and resources to devote to energy efficiency. Once an initial audience with a customer was obtained, visual representations of energy usage data over time in the forms of heatmaps, charts, and graphs proved to be an extremely effective tool in fostering customer understanding of energy efficiency opportunities in a short period of time, particularly with audiences who were relatively unfamiliar with the building's energy usage.

The BEA provides customers with a range of such tools. For example, a demand heatmap (Figure 1) could be used to show customers that their energy usage did not change significantly when their building was unoccupied, indicating opportunities to reduce heating and cooling energy use during those hours. Visualization tools like the demand heatmap also provided valuable credibility to the ComEd team during initial customer discussions, as they demonstrated in-depth understanding of the customer's energy use.



Figure 1. Demand Heatmap from ComEd Business Energy Analyzer – Suburban Chicago Office Building

A distinct change in the electrical energy demand of the facility electric load profile can be seen as a result of RCx improvements to HVAC scheduling that were implemented on October 3, 2014. Prior to implementation the heatmap shows relatively high energy usage

intensity during off-peak hours. After the updated HVAC schedule was implemented, a clear operating schedule of 6 am to 9 pm is evident, with reduced energy usage intensity during off-peak hours.

Multi-Channel Outreach Strategy

Support for RSPs

The large scale of RCx projects under the original program design meant that the fees paid to the RSP could reach as high as \$100,000; with this amount of potential revenue at stake, RSPs were (and are) motivated to market the flagship RCx program to both existing and potential new clients. This model has proven highly successful; the service providers have brought in the vast majority of full-scale RCx projects to the program. Their marketing efforts and high level of technical expertise have been integral to the success of the program to date.

However, when interviewed during development of the RCx Building Tune-Up program design, RSPs understandably indicated that the low fees available for these projects (less than \$5,000) would not justify devoting significant business development resources to generate projects. RSPs were encouraged to pursue what projects they could easily generate through means such as discussing the potential for the new offer at buildings operated by their existing client base. Recognizing the scalability of the program, some RSPs also focused on outreach to businesses with common ownership of many buildings that were extremely similar in building type and equipment, such as chain restaurants and locations for national retailers.

Despite their initial reservations, RSPs brought over 50 projects to the program in the months following its official launch in June 2015. ComEd continues to support their outreach efforts, and is evaluating program design changes that will make marketing of the RCx Building Tune-Up more attractive to the RSP network, such as offering compensation for some aspects of business development activity related to RCx Building Tune-Up projects. As the offer also provides RSPs with an opportunity to grow their existing RCx business to a broader market, develop new customer relationships, and expand existing ones, this channel remains a promising source of program growth.

Outbound Calling Campaign

With the RSPs expected to play a reduced role in driving participation in the new offer, it was clear that a significant portion of the marketing and business development would need to be performed directly by ComEd. Two main approaches were employed to generate project leads. The first focused on reaching large numbers of potential customers one at a time, while the second focused on reaching single individuals who had the authority to greenlight projects for many buildings at once.

While some of the target customers for the new offer were managed by large entities (for example, chain stores or buildings operated by commercial real estate portfolio management firms), the majority were businesses that were not part of a much larger organization; instead, they were generally individually managed, or part of a very small portfolio. In order to reach these one-at-a-time customers directly, an outbound calling campaign was used.

The campaign used a tailored over-the-phone assessment provided by EnVinta to identify each customer's current energy management technologies and practices, and to

stimulate their interest in improving energy management at their facility. Assessment questions were targeted based on the customer's business type; for example, medical offices would answer different questions than grocery stores. The call center agent also had access to building-specific facts from the Agentis analysis that could be used as an icebreaker and to establish credibility. For example, when talking to a building with poor shutdown practices, the agent would mention that ComEd had evaluated their energy usage, noticed the opportunity, and wanted to let them know that they were a good candidate for the new RCx Building Tune-Up offer. Customers who fit the eligibility criteria for RCx and expressed interest were referred to Nexant, the program implementation contractor, for follow-up.

To generate awareness and interest in ComEd's portfolio of energy efficiency programs, all customers who completed the five-to-ten-minute phone interview received a customized report helping them understand their building's energy usage, including:

- Recommendations for equipment retrofits and behavioral strategies to reduce energy usage
- Comparison of their energy use with similar buildings
- Estimates of potential savings
- Links to RCx and other ComEd incentives and programs

In total, over 200 customers contacted by the calling campaign indicated interest in the RCx Building Tune-Up offer, leading to over 35 projects (including some "bonus" projects when the customer reached over the phone turned out to have multiple facilities under their control).

Targeted Outreach to Commercial Real Estate Portfolio Managers

The second element of the RCx Building Tune-Up customer engagement strategy focused on direct outreach to managers of commercial real estate (CRE) portfolios that contained buildings in the target size range. For the previous few years, ComEd had engaged a team of sustainability-focused CRE professionals to develop relationships with highly-placed individuals within CRE management firms, and to educate those individuals about the availability of ComEd energy efficiency incentives and programs. This represented a very different approach from the one-by-one strategy used by the calling campaign. Rather than using call volume to generate scale, in this case scale was generated by reaching out to and building relationships with people who could influence spending and budgeting decisions for many buildings at once.

From the start, the CRE outreach team had included discussion of RCx in their energy efficiency conversations with portfolio managers. The addition of RCxpress and the RCx Building Tune-Up offers allowed the outreach team to discuss RCx in the context of a much larger number of buildings; in most cases, they could now work with their customer contacts to screen a CRE firm's entire portfolio of managed buildings for RCx opportunities.

The analytical capabilities and the visualization tools provided by the BEA are employed in these conversations. Once a portfolio manager provides a list of buildings, that list can be screened to determine which option of RCx is most suitable for each, using factors like building size, annual usage, and the algorithms for identification of high savings potential. The CRE outreach team can then use demand heatmaps or other charts to educate the

customer about the opportunities. As the decision-makers being targeted by CRE outreach are sometimes not involved in energy management, these visualization tools are especially valuable.

Results and Next Steps

At the time of this writing, approximately 60 RCx Building Tune-Up projects are expected to complete by the end of the offer's first year in market, with another 45 projects underway. On average, the completed projects represent savings of approximately 73,000 kWh each, or a total of about 4.4 GWh saved for participating customers, who ranged from medical clinics and restaurants to big-box retail stores and small multi-tenant office buildings. All three of the main marketing approaches – RSP-led business development, the outbound calling campaign, and direct outreach to commercial real estate managers – proved successful in raising market awareness and in bringing new projects to the program. The use of energy usage analytics in screening, targeting, and engaging customers was also instrumental in driving project volume.

The first year in market with the RCx Building Tune-Up also provided ComEd with a wealth of information from customers and marketing partners that is being incorporated into program design updates. In addition, a roundtable discussion was held with participating RSP firms to better understand their concerns and to gather their suggestions for program improvements.

Program Design Updates

As mentioned previously, RSPs were hesitant at first to devote resources to business development for RCx Building Tune-Up projects. Since it wasn't always clear which customers might be receptive to the offer, the risk of devoting resources to sales efforts with uncertain results was not worth the relatively small reward. In addition, under the original compensation framework the RSPs did not receive any payment until partway through the project, so were even more hesitant to do up-front work without some sort of guaranteed revenue.

To address that concern, the compensation framework is being changed to guarantee RSPs a small fixed fee for doing initial site visits for business development purposes. Before proceeding farther, the RSP will submit their initial findings, and ComEd will use the analytics within the BEA to further evaluate the building for energy savings potential. Only those buildings with enough potential savings to make the project worthwhile will be approved to go forward. By strengthening the original project screening process in this way, ComEd will be able to minimize resources devoted to marginal projects, and to take better advantage of the RSP network's proven skills in business development. In turn, the RSPs will be paid for some or most of their business development efforts even in cases where a project doesn't materialize, greatly lessening their financial risk.

The project life cycle is also being adjusted to better devote resources where they will generate the most benefit. Average savings per project proved to be lower than anticipated in the original design, creating a need to re-think the original cost structure. Customer and RSP feedback indicated that the number of meetings and the amount of detail included in reports could be reduced without impacting technical quality or customer satisfaction, so those requirements were reduced. RSPs also indicated frustration with the limited scope for

investigation, and stated a desire for flexibility to dig deeper than the few prescribed areas where they saw significant energy savings potential. By shifting a portion of their compensation to a performance-based structure, the program provided them with that flexibility while protecting itself from additional expense in the event that the extra work proved unfruitful.

Finally, many customers, as well as the RSPs, expressed interest in receiving information about potential natural gas savings along with the electric savings, as was part of the RCx program options for bigger buildings. In many cases, an operational improvement identified by a project yielded therm savings along with kWh, but those savings weren't being quantified or communicated. By adding that activity to the project scope where feasible, significant additional customer benefit will be recognized at minimal additional expense to the program.

Changes to Marketing Strategy

In addition to adding support for RSP business development efforts, ComEd identified several areas where the calling campaign tactics could be improved. Originally, customers who agreed to participate in the call were asked a variety of questions about their facility. Some of them - for example, questions about their lighting equipment - were designed to generate awareness and potential leads for other ComEd efficiency programs, particularly the standard program, which provides incentives for equipment retrofits.

The EnVinta team, as well as the Nexant personnel conducting follow-up calls, found that the relatively broad focus of the initial phone conversation left customers uncertain about next steps. When contacted to follow up on their interest in RCx, they recalled the phone assessment but not the call to action to fill out an application for an RCx Building Tune-Up. Going forward, the questionnaire for the outbound caller to complete will be much more focused on gathering the information needed to screen the customer for RCx. Customers who are not a good fit will receive information about the suite of energy efficiency programs offered by ComEd, but not a follow-up from the RCx team.

Segmentation and targeting of customers will also be more detailed going forward in the calling campaign. Initial segments used to generate call lists were created using a single variable such as building size or annual electric usage to screen for potential fit for the RCx Building Tune-Up offer. The algorithms in the BEA that flagged customers with poor shutdowns in unoccupied hours, poor responses to hot weather events, and increases in year-over-year energy use were used to help the call center representative build rapport with the customer by demonstrating understanding of their usage, but not to create lists of customers with one or more of those qualities. In the next phase of the calling campaign, customers sharing multiple characteristics – for example, buildings with annual energy use less than 3 GWh as well as poor shutdown procedures – will be targeted, with call scripts and marketing messages tailored appropriately. Additional marketing tactics such as e-mail campaigns, webinars, or postcard mailers are being considered for these more refined segments as well.

Future Initiatives

Two very encouraging developments with potential to impact program direction are worth noting. The first of these was identified early on in program design. The RCx Building Tune-Up offer was a good fit for a number of businesses that have dozens or even hundreds of

locations in the ComEd footprint; these include chain restaurants, big-box retailers, bank branches, and similar facilities. The potential for rapidly scaling the offer was evident from the start; such buildings frequently share ownership and management, so approval for large numbers of locations could frequently be gained from one person (note that this is the model used by the CRE outreach channel). In addition, locations were frequently very similar in terms of building size, equipment, and even operating procedures, implying that findings from one site could potentially be applied to a large number of sister sites, allowing a large number of Tune-Up projects to be conducted at a very low cost.

During the first year, several customers fitting this description participated in the program. To increase understanding of the similarities and savings potential for businesses of this type, projects were typically accepted into the program in groups of five. Results available at the time of this writing suggest that available savings across locations is not as consistent as expected, validating the decision to go slow. However, the sample size is small, and there are many entities that fit the profile described above. Should this approach prove to be scalable, hundreds of projects per year could be generated from only a few customers; dedicated outreach to this segment, supported by analytics identifying those locations with the highest savings potential, could generate explosive program growth.

The second area with implications for not only the RCx Building Tune-Up program but all of ComEd's energy efficiency efforts is the ongoing smart meter rollout. By 2019, every ComEd customer will have a smart meter, making possible the types of analytics currently provided by the BEA for customers with peak demand greater than 100 kW. If a cost-effective version of the RCx Building Tune-Up could be developed for customers below 100 kW, the size of the target market would increase into the hundreds of thousands. The real-time capabilities and increased granularity of data collected by smart meters also offer potential for greatly improved customer service through tools such as alerts for energy usage that exceeds customer-selected thresholds, and more detailed load profiling. Smart meter data is being added to the BEA as it becomes available (for customers both above and below the 100 kW level), and various new offers targeting small businesses are under development.

Conclusion

The RCx Building Tune-Up was designed to expand the existing RCx program model to serve an increasingly wide range of commercial customers within ComEd's territory. It overcomes the financial and human resource constraints faced by smaller-sized customers and takes advantage of advanced analysis of energy usage data in identification of energy savings potential and in customer engagement. By partnering with its service provider network and companies skilled in data analytics, calling campaign execution, and outreach to commercial real estate portfolio managers, ComEd has developed a multi-faceted strategy to reach the thousands of potential customers for this new offer.

References

There are many commercial applications that use interval meter data for identifying energy efficiency opportunities. The Lawrence Berkeley National Laboratory has monitored the evolution of these software solutions and analyzed their capabilities for over a decade; visit eis.lbl.gov for more information.

ComEd is an Organizing Partner of the Department of Energy/LBNL's Smart Energy Analytics campaign, which will be launched in October 2016. The campaign is intended to facilitate adoption of analytics software and ongoing monitoring to help building owners and managers find and fix building performance issues, increasing their energy efficiency. Information on this campaign is available at <https://smart-energy-analytics.org>.