TRENDS IN MARKETING, EDUCATION, AND OUTREACH FOR ENERGY EFFICIENCY

A GUIDE FOR CITIES SEEKING TO DRIVE ENERGY SAVINGS THROUGH UTILITY PROGRAMS

For the City of Chicago's Urban Sustainability Directors Network Innovation Grant Project, Leveraging Benchmarking to Drive Savings

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Institute for Market Transformation | November 2018

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USDN urban sustainability directors network

Table of Contents

Abstract 2

Introduction 4

1. How Program Administrators Market Energy Efficiency Programs 7

   1.1 Mass Marketing 7

2. Targeted Marketing Delivery Channels 9

   2.3 Key Accounts Managers 12

3. Measuring Success with Marketing 13

4. Ongoing Challenges Associated with Energy Efficiency Marketing 15

5. How a City Can Use Building Performance Data to Drive Participation in Energy Efficiency Programs 16

   5.1 Chicago's Energy Benchmarking Ordinance 16

   5.2 How ComEd Currently Markets Programs 18

   5.3 Other Cities' Experiences with Using Benchmarking Data to Drive Energy Savings 19

   5.4 Recommendations for a City/Utility Pilot 21

6. Conclusion 22

References 23

Appendix A: How Cities Can Understand Their Utility's Approaches to Marketing to Enable Greater Coordination Around Energy Efficiency 25

Appendix B: Research Methodology 27

Acknowledgements 28

About the Institute for Market Transformation (IMT) 29

About the Urban Sustainability Directors Network (USDN) 29

Disclaimer 29

Abstract

The City of Chicago (Chicago) and a coalition of three additional Midwestern cities are seeking to leverage the data they collect under their benchmarking and transparency ordinances to drive higher participation in utility-provided energy efficiency programs and services. To support this effort, Chicago and the cities of Evanston, IL; Kansas City, MO; St. Paul, MN; and Saint Louis, MO, have received an Urban Sustainability Directors Network (USDN) Innovation Grant to enable them to conduct research and a pilot project to address this issue. Specifically, the cities of Chicago and Evanston will partner with their investor-owned electric utility, Commonwealth Edison (ComEd) to share data and begin collaborating further on outreach to low-performing buildings. The cities of Kansas City, St. Paul, and St. Louis will utilize the results of the research and pilot to increase collaboration with the utilities providing service in their respective areas.

Chicago and Evanston will use the data from benchmarking and transparency compliance to engage building owners and property managers, and encourage them to participate in ComEd energy efficiency services and programs. The objective of the pilot is to demonstrate that cities can leverage the data from benchmarking and transparency policies to drive quantifiably higher participation in utility energy efficiency programs, thus increasing energy savings. By driving higher participation, the pilot would justify further collaboration, joint programming, and potentially more open data-sharing between the entities.

In order to structure the pilot to be effective, Chicago and its partners have requested that the Institute for Market Transformation (IMT) research how utilities currently conduct energy efficiency marketing, engagement, and outreach (ME&O). The research identifies common and emerging practices around utility ME&O, as well as gaps that remain in driving energy savings. The first part of this report includes background on general trends and practices in how utilities market efficiency, including mass and targeted marketing, and common delivery channels. The second part of this report summarizes the experience so far with marketing energy efficiency programs by Chicago and Evanston and by ComEd, and provides initial recommendations for structuring the pilot based on research and experience with other city-utility partnerships. The report also includes an Appendix with steps that a city could take to understand how its utilities conduct

marketing, in order to conduct similar research for their area and/or to develop a similar pilot.

Introduction

Utilities spent over $6 billion on energy efficiency programs in 2015.[1] Costs for program administration—including marketing, engagement, and outreach—may exceed 25 percent of the total costs for commercial programs, and 33 percent for residential programs. As utilities are tasked with achieving higher energy efficiency goals while energy savings opportunities are reduced by increasing federal equipment and appliance standards and higher energy codes, marketing, engagement, and outreach (ME&O) is becoming more important to deliver higher energy savings at a lower per-customer cost. Working to reduce customer acquisition to levels below 26–33 percent also helps to ensure that programs can continue to operate in a financially sustainable manner.

This report provides an overview of common trends in how energy efficiency program administrators (primarily utilities) and their partners market energy efficiency programs and services to customers. While program administrators market to customers generally ("mass marketing"), targeted marketing is a growing area. Targeted marketing is not a new idea, but the challenges have been tailoring the message appropriately and taking the time to do the customization. Program administrators may identify types of customers to target based on their propensity to adopt energy efficiency, their energy savings potential, their market segment, or other characteristics. They also use a variety of delivery channels, including program and outreach contractors, trade allies, key account representatives, and customer service representatives.

Despite the growing depth of knowledge and innovation in this area, barriers remain to achieving higher energy savings. Drawing on research on how program administrators market energy efficiency, this report provides recommendations to inform the design of a pilot by the City of Chicago and additional participating cities, which will be partnering with ComEd to engage building owners and property managers who comply with the Chicago Energy Benchmarking Ordinance, and then referring them to ComEd programs. The objective is to

[1] Ian Hoffman et al., Lawrence Berkeley National Laboratory, The Cost of Saving Electricity Through Energy Efficiency Programs Funded by Utility Customers: 2009-2015 (June 2018) pp. viii, 8, 36, http://eta-publications.lbl.gov/sites/default/files/cose_final_report_20180619_1.pdf (includes incentives, program administration and marketing, technical assistance, and evaluation, measurement, and verification).

develop a productive city-utility partnership in which it is possible to use each entity's respective strengths and to obtain a measurable outcome as to whether the city's engagement using this data led to greater energy savings. Joining Chicago are the cities of Evanston, Illinois; Kansas City, Missouri; St. Louis, Missouri; and St. Paul, Minnesota. All are providing guidance and feedback on the structure of the pilot and intend to leverage its results to engage with their respective energy utilities around improving participation in energy efficiency programs.

Local government staff can use this report to better understand how their utilities or other program administrators market energy efficiency programs, and to identify opportunities to partner with their energy utilities on outreach and on furthering participation in energy efficiency programs. These opportunities include programs that leverage the data being collected under a benchmarking and transparency ordinance. Appendix A provides guidance on how to answer key questions about energy efficiency marketing to support utility partnership.

HOW UTILITIES IMPLEMENT ENERGY EFFICIENCY PROGRAMS AND SERVICES

Most utilities have a requirement, or at least a goal, to provide energy efficiency products and services to their customers. Where energy efficiency is required, the framework for the offerings is often set at the state level, approved by a public utility commission. State law or public utility commission rules may define how much energy efficiency the utility is required to deliver (for example, a percent of sales) and the standards under which it must be delivered (for example, it must be cost-effective under a particular method of measurement). In some states, utilities may have a cap on the amount of money they can spend on these programs.

Utilities often have some degree of flexibility in proposing a range of energy efficiency products and services that are cost-effective and will meet their energy savings requirements or goals. Many utilities will offer a mix of residential, nonresidential, and low-income energy efficiency programs. These programs may be divided into rebates for energy savings measures, performance-based incentive programs, informational or behavioral programs such as energy audits or comparative bills, and midstream or upstream incentives to manufacturers and distributors.

This document frequently uses the term “program administrator,” as energy efficiency programs may be managed by utilities, state agencies, nonprofits, or other entities. While the research has focused on energy efficiency programs run by electric utilities, similar practices seem to be in use for other types of program administrators for natural gas or water utilities.

1. How Program Administrators Market Energy Efficiency Programs

Energy efficiency program administrators use two key strategies to market their energy efficiency programs to customers: mass marketing and targeted marketing. This report primarily focuses on targeted marketing. Program administrators and their vendors are becoming more sophisticated about targeted marketing to drive uptake of energy efficiency and other programs, but the industry often lags in its application of such techniques compared to industries like e-commerce.

1.1 Mass Marketing

Most program administrators engage in mass marketing, which is undifferentiated marketing to a large group of customers. To the extent it is segmented, it is to very large groups, such as customer classes—for example, to "residential" versus "nonresidential" (business) customers. Mass marketing aims to reach as many customers as possible to increase awareness of energy efficiency programs. The program administrator may market the umbrella brand for its energy efficiency programs and services, rather than any specific product. Mass marketing tactics include websites and online ads, radio ads, billboards, emails, direct mail, bill inserts, and event sponsorship (providing logos or tabling at a sporting or music event, or trade show). Program administrators may use a variety of metrics to assess the success of mass marketing, such as television ad exposure or increases in Facebook followers or web traffic.

1.2 Targeted Marketing

Program administrators also engage in targeted marketing through which they segment aspects of their customer base and engage them in different ways. This allows them to develop unique messaging appropriate to different customer segments. Market researchers recommend that program

administrators consider three dimensions of engagement for each customer[2]:

1. Propensity to Act: Based on attitudes, beliefs, and trust in actors like utilities, is the customer likely to invest in efficiency?
2. Energy Potential: Based on building characteristics, uses, and equipment, how much energy or demand can the customer save?
3. Customer Segmentation: Based on common barriers, motivations, and demographics, what messaging and activities will most resonate with the customer?

For example, a group of farm-to-table restaurants in a concentrated downtown area could have high propensity to invest in energy efficiency, share common barriers (tenancy, equipment, operating hours), and be motivated by concerns both about sustainability and reducing food spoilage.

Program administrators may use their judgment to segment customers in diverse ways (see Fig. 1). In practice, program administrators are still learning how to target market effectively. It is common to target larger customers with higher energy savings potential—healthcare, universities or public schools, data centers, and manufacturing. It is less common for program administrators to target unique subsets of small- and medium-sized businesses.

[2] Amanda Dwelley for Opinion Dynamics, Enhancing Targeting and Segmentation with Customer Engagement and AMI Data (AESP Brown Bag, Nov. 7, 2013), available at http://library.aesp.org/resources/Docuworks/file_display.cfm?id=1139.

Segmentation Approach	Description
Industry	Whether the customer provides a unique service or product
Building stock and characteristics	Size of the property, whether the occupant is an owner or renter, etc.
On-site equipment	The end uses within the building, which could be unique (bakeries, laboratories)
Barriers to becoming efficient	Operational and administrative characteristics, types of equipment, lack of information, how the business runs
Geography	Regional uniqueness, similarity of customers within a particular geographic area

Fig. 1: Types of Customer Segmentation

However, desk research and interviews identified a number of unique customer segments that utility program administrators have engaged or considered engaging, include breweries or distilleries; restaurants; grocery stores; big-box retail stores; small healthcare and dental clinics; lodging; indoor agriculture; gas station franchises; manufactured home dwellers; houses of worship; low-income renters; warehouses; amusement parks; dry cleaners; and regionally unique food and beverage production, such as wineries or cheesemakers. These segments can be identified by considering alignment of energy end uses and corresponding energy efficiency measures available in the utility programs.

2. Targeted Marketing Delivery Channels

ME&O around energy efficiency may actually be delivered by many different actors working at or with an energy utility. This can include program implementers that are hired to oversee particular energy efficiency programs or services; trade allies who sell energy-efficient equipment to customers; and the key accounts managers and customer service representatives who work directly with utility customers.

DEFINITIONS OF KEY ROLES

- Program administrators – the utility staff, state agency staff, or contracted third parties that oversee energy efficiency programs.
- Program implementers – the contracted third parties that manage specific energy efficiency programs.
- Outreach service providers – the contracted third parties that manage outreach and engagement with customers. Some utilities include this role within other aspects of program implementation.
- Trade allies – trusted contractors who work directly with customers to make energy improvements. The utility often supports a trade ally network with information and recognition.
- Key account representatives – utility staff who work with the utility's largest (in energy usage and revenues) accounts.
- Customer service representatives – utility staff who engage with mass market customers regarding bill payment, programs, disconnection, and other issues. (Sometimes also called account managers).
- Vendors – contractors the utility hires to oversee or implement aspects of energy efficiency programs. These may include program administrators, program implementers, and outreach service providers. (The term is not intended to be a legal distinction and is used generically to refer to third-party contractors.)

2.1 Energy Efficiency Program Implementers

Program administrators oversee the full range of program design, rebate distribution, ME&O, measurement and verification, and other services. They often hire additional program implementers that manage suites of programs (residential, business), smaller program segments (retail stores, multifamily) or specific services (outreach, facility assessments). Measurement and verification is also typically completed by a separate third-party vendor. For utility program administrators, approaches to how they contract for program implementation can fluctuate depending on the size of their customer base, their staffing levels, regulatory requirements, the types of energy efficiency programs that will deliver the energy or demand savings they require, the need to use competitive bidding, and the skillsets of available vendors.

Program implementers may have varying roles with regard to outreach and engagement of customers. Some implementers are hired to only conduct outreach, and do not actually operate the energy efficiency program(s) they are marketing. Other program implementers are responsible for the ME&O, as well as the day-to-day operations of the efficiency program(s) they are marketing. In these cases, they undertake direct outreach to customers, drawing on industry associations, local networks and partners (local governments, chambers of commerce), trade shows, their own market research, or customer contact lists purchased from marketing entities.

In the process, program implementers may receive varying levels of data from program administrators. For example, some program implementers may receive access to a utility's customer relationship management system (i.e., a Salesforce account) to update contact information and customer interactions. Obtaining this information may require program implementers to undergo security screenings and sign non-disclosure agreements. Other program implementers may work with a utility to develop customer segmentation and messaging, but the utility pushes the messaging out to customers through email and other channels, rather than sharing contact information. The level of data available can differ based on utility preferences and the regulatory environment. Additionally, growing concerns about cybersecurity are leading some utilities to require additional protections for individually identifiable customer data.

2.2 Trade Ally Networks

The trade ally network is the group of energy service providers that the utility engages. As with some program implementers, trade allies are the "boots on the ground"; however, they usually do not receive data from program administrators on customer leads. Program administrators do work with trade allies to provide program information, case studies, co-branded collateral, and trainings. Program administrators may also require trade allies to meet certain qualifications, and to attend regular trainings on the utility programs. Utility program administrators may also provide trade allies with proprietary models that they can use to calculate cost savings in a standardized way across customers. Puget Sound Energy in Washington state is also creating a "DSM Central" that allows trade allies to follow along with rebate processing online.

Program administrators often cannot refer customers to particular trade allies. However, they can rank and recognize trade allies based on participation, customer satisfaction, and other metrics. They can also refer customers to searchable lists of trade allies. For some energy efficiency programs, the program administrator may require special certifications or there is a closed network of contractors who can provide the particular service.

Trade allies often bring in a considerable fraction of the energy efficiency participants and projects that enroll in energy efficiency programs, with one source suggesting that they generate 75 percent of utilities' annual electric savings.[3] This is in part because trade allies can specialize around particular industries, and learn their touchpoints for making decisions about capital investments. Furthermore, trade allies can be effective advocates for energy efficiency programs where customer trust in the program administrator is low.

2.3 Key Accounts Managers

Key accounts managers work with particular utility clients, often large energy users such as universities, government agencies, or manufacturers. Idaho Power, for example, has eight major account representatives for commercial and industrial customers; six representatives for agricultural customers; and five representatives for education customers.

Traditionally, key accounts managers worked with these large customers to ensure low rates and accurate bills. They also take care of other requests, such as extending service to new facilities, or metering issues. However, in recent years, key accounts managers have become more proactive to engage large customers around energy efficiency and renewable energy issues that both impact their bottom lines and help them meet corporate or municipal energy goals. Anecdotally, key accounts managers are often responsible for the projects with the highest per-project energy savings. Some utilities encourage or require their key accounts managers to promote energy efficiency solutions with customers. In very rare cases, the utility will make portions of compensation dependent on achieving energy savings.

[3] DNV GL, Knowing Our Trade Allies and How They Work: Cross-Program Trade Ally Survey Results (2018), https://www.dnvgl.com/publications/knowing-our-trade-allies-and-how-they-work-116111.

2.4 Customer Service Representatives or Account Managers

Customer service representatives (CSRs), like key accounts managers, have been moving from a reactive to a more proactive position in connecting utility customers to energy efficiency services. Traditionally, CSRs respond to customer calls or emails to help them troubleshoot questions. However, CSRs may be asked to provide additional customer value by analyzing their energy bills or load profiles in order to recommend energy efficiency programs or rate plans that might be a fit for those customers. This approach remains an emerging area and not every CSR is currently cross-trained in how to encourage customers to participate in energy efficiency programs; moreover, CSRs frequently are encouraged to ask as few questions as possible of customers. As with key accounts managers, CSRs may have a portion of their compensation tied to achieving energy savings goals.

3. Measuring Success with Marketing

Program administrators measure the success of their programs in quantitative and qualitative ways. From the quantitative perspective, they frequently consider portfolio-wide metrics, such as:

- Proportions of customer classes that participate in energy efficiency offerings (residential, commercial, industrial);
- Progress toward achieving energy and/or demand savings targets, which may be goals or requirements; and
- Cost-effectiveness of the energy efficiency portfolio, which should create benefits for customers in the form of lower costs for power supply.[4]

However, they may also tie themselves and their contractors to particular key performance indicators (KPIs) (see Fig. 2). Program implementers can be required to meet particular KPI targets in order to receive payment. Additionally, because customers may enter an energy efficiency program through many channels—recommendations from a CSR, trade ally outreach, email marketing—implementers may have to document their customer engagement in order to demonstrate

[4] Cost-effectiveness tests can vary from a simple counterfactual (Would it have cost more to obtain new power supply than to invest in energy efficiency?) to complicated assessments as to the societal benefits that are created through energy efficiency, such as carbon reduction and job creation.

that they triggered the energy efficiency investment or behavior.

Sample KPI	Description
Generating Qualified Leads	Early-stage contacts with customers, like helping them fill out pre-applications
Completed Facility Assessments	Facility or energy assessments are typically abbreviated forms of energy audits that can identify energy savings opportunities
Project Applications	Completed applications for rebates or incentives, typically tied to one or more retrofit or upgrade projects
"Audit to Action" Metrics	Achieving a certain number of projects or energy savings after completion of a facility assessment

Fig. 2: Sample KPIs

Not every program administrator includes these kinds of KPIs in its contracts. The particular KPIs included may depend on the scope of work for the program implementer and the culture or any regulatory requirements of the program administrator. Program implementers may instead be tied to administrative KPIs, like quick rebate processing times. However, even if they are not tied to performance on energy savings, they may still evaluate certain metrics internally, such as "cost of acquisition" (investment to get qualified leads) or "cost of MMBTU" (investment to drive savings normalized across electric and natural gas programs).

Program administrators also assess the performance of their energy efficiency programs qualitatively, through process evaluations. These evaluations may map the customer experience to identify barriers, and often involve surveying trade allies and customers. Process evaluations sometimes identify opportunities to improve marketing and customer engagement.

4. Ongoing Challenges Associated with Energy Efficiency Marketing

While energy efficiency programs have achieved significant energy savings since their inception, they remain subject to key challenges—some of which a city/utility pilot could consider addressing, summarized in Fig. 3 below.

Barrier	Potential Solution
Utilities earn revenue for selling electricity and are thus disincentivized to promote efficiency.	Ratemaking tools that allow utilities to recover costs regardless of sales, such as decoupling or disincentive offsets.
In order to meet requirements around energy savings and cost-effectiveness, utilities may prioritize high-impact customers rather than hard-to-reach markets or small customers.	Utilities can engage trusted entities like local governments and community-based organizations to reach out to underserved customer segments.
Utilities may not necessarily have an aptitude in marketing energy efficiency programs, which have a different value proposition than other utility services.	Utilities can actively work with third parties that have expertise in customer segmentation and marketing to identify messaging that resonates.
Utilities may not have access to key decision makers at a building or business (e.g., bills are paid by an accounting department).	Utilities can work with third parties that engage with decision makers, including local governments, chambers of commerce, and other organizations.
Efficiency programs may be highly fragmented across market segments and programs with different implementers.	Utilities should work to reduce silos between staff and contractors by identifying an entity to develop and implement a coordination plan.
Vendors such as program administrators, program implementers, and outreach service providers, do not always have access to customer information.	Utilities should provide vendors secure access to customer information that allows for segmenting and tracking of contact with decision makers.
Administrative requirements to obtain a rebate may be driven by concerns about audits and establishing correct documentation rather than user experience.	Utilities should upgrade systems to enable quick, online processing, and work with trade allies and contractors to submit documents on customers' behalf.

Fig. 3: Energy Efficiency Barriers and Potential Solutions

5. How a City Can Use Building Performance Data to Drive Participation in Energy Efficiency Programs

As utilities are finding it necessary to engage with harder-to-reach customers and cities are adopting aggressive climate and energy goals, both entities are increasingly positioned to work together to drive deeper energy savings. Building performance ordinances, such as the Chicago Energy Benchmarking Ordinance and the ordinances of partner cities participating in this pilot, have been one of the key contributors to this type of engagement.

This section considers the practices identified in the first part of the report and ties them to the city experience, using Chicago as an example. The report first describes progress under the Chicago Energy Benchmarking Ordinance and the purpose of the City's pilot. Subsequent sections overview some of ComEd's existing ME&O practices and generic ME&O challenges faced by many utilities offering energy efficiency programs. Finally, the report offers recommendations for consideration by Chicago and its partners in developing the ComEd pilot to be scalable and replicable for any city with a benchmarking and transparency ordinance.

5.1 Chicago's Energy Benchmarking Ordinance

Chicago's energy benchmarking ordinance, adopted in 2013, covers all commercial, institutional, and residential buildings 50,000 square feet and greater in size. Property owners are required to measure and report whole-building energy use annually, and perform additional data verification every three years. To date, nearly 2,800 property teams have complied with the ordinance, which represents a compliance rate of 92 percent by floor area and 85 percent by number of properties.

Similar to all other energy benchmarking requirements in the U.S., Chicago utilizes the ENERGY STAR Portfolio Manager tool as the means to complete benchmarking and report information. The information collected through the benchmarking ordinance includes basic property information (building type, space uses, size, year constructed), as well as energy use by fuel source, including electricity, natural gas, chilled water, steam, hot water, and other fuels. The City also collects performance metrics from ENERGY STAR Portfolio Manager, such as the 1–100 ENERGY STAR score, which is

available for about 85 percent of properties, as well as energy use per square foot.

While the specific metrics collected by each city varies slightly, most cities collect basic property information (type of building, address, square footage, year built), as well as energy use information by fuel source and key energy performance metrics. The U.S. Environmental Protection Agency publishes an annual list of metrics recommended for cities with energy benchmarking ordinances to collect.

In Chicago, the whole-building electricity information required to complete energy benchmarking is provided by ComEd to property owners upon request through their Energy Usage Data System (EUDS) tool, a secure, online service.

Some of the key metrics reported each year are posted online in the City of Chicago's Data Portal.[5] Information is also posted to an online, interactive map, found at: http://cityenergyproject.github.io/chicago/.

Beginning in 2015, the City of Chicago developed energy benchmarking scorecards. These scorecards contain a brief summary of the property's energy performance; a peer comparison to similar buildings in Chicago; an estimate of energy savings available; and suggestions for making energy improvements. Scorecards are personalized, although recommendations for making improvements are fairly generic, and not currently based on specific energy metrics found in the benchmarking reports.

Since 2014, the City has found that buildings that participate in energy benchmarking for several consecutive years tend to see an average 1 to 2 percent energy reduction (weather-normalized) per year. However, some poor performing properties do not appear to be making improvements, and some properties are increasing their energy use. To address these properties and continue the acceleration of energy savings, the City is interested in working to identify poor performers and connect them with energy efficiency program resources from ComEd and other entities.

[5] For example, the most recent dataset can be found at: https://data.cityofchicago.org/Environment-Sustainable-Development/Chicago-Energy-Benchmarking-2016-Data-Reported-in-/fpwt-snya

5.2 How ComEd Currently Markets Programs

ComEd is the investor-owned electric utility that serves customers within both the City of Chicago and the City of Evanston, and is ranked in the top 10 of American Council for an Energy-Efficiency Economy's (ACEEE) 2017 Utility Energy Efficiency Scorecard.[6] For 2019, ComEd has an incremental energy savings goal of 1,022,508 MWh and a total annual budget of roughly $351.6 million.[7]

ComEd works with a variety of partners to offer energy efficiency programs. This includes contractors who work with mass-market customers and manage trade ally relations, and sector-specific contractors that work with commercial real estate, healthcare, laboratories, and nonprofits. These contractors are divided into "outreach service providers" (OSPs) who provide direct engagement with customers to enroll them in programs, but who do not typically administer the programs. ComEd also hires "implementation contractors" who then complete facility assessments and process efficiency upgrade applications. Note that many "implementation contractors" also perform outreach. ComEd's contractors frequently have KPIs that require them to deliver certain numbers of qualified leads, completed facility assessments, and applications for efficiency projects (see Figure 2 for more details on sample KPIs).

ComEd does work with contractors to identify relevant market segments for engagement, often using its databases to examine energy usage profiles and energy efficiency measures that have been installed by similar customers. Additionally, some OSPs have the ability under non-disclosure agreements to access ComEd's customer relationship management system to update records as they have sales calls.

ComEd has an interest in continuing to adopt more best practices around ME&O. Examples include developing more specialized outreach teams to address unique, high-value customers, undertaking rigorous market research to identify segment-appropriate messaging, and ensuring that their key

[6] Grace Relf et al., u1707, The 2017 Utility Energy Efficiency Scorecard (2017), http://aceee.org/research-report/u1707.
[7] Illinois Commerce Commission, Docket 17-0312, Compliance Filing of Commonwealth Edison Company, Feb. 28, 2018, https://www.icc.illinois.gov/docket/files.aspx?no=17-0312&docId=266073.

accounts and outreach service provider teams are connected when they engage large customers.

5.3 Other Cities' Experiences with Using Benchmarking Data to Drive Energy Savings

Several other cities and utilities are in various stages of using benchmarking data to engage building owners around energy efficiency. This data frequently includes ENERGY STAR scores and energy use intensity ("EUI") results from building benchmarking, but in some cases may include building equipment and audit reports. Quantifiable results have so far been limited, as most of the pilots are newer. Examples include:

- The San Francisco Energy Watch, by the San Francisco Department of the Environment, uses benchmarking data as a trigger for building owner engagement. SFEW looks at the buildings that report the highest increases and decreases in energy use, and then engages with them to ensure the benchmarking data is accurate; assess the reasons for the increase or decrease based on obtaining 15-minute interval data from PG&E[8]; and offer rebates where relevant. SFEW uses benchmarking data as only one of many channels to meet people where they are at, and considers use of benchmarking data still to be experimental.
- New York City requires building owners to benchmark their buildings (Local Law 84) and to obtain energy audits or retrocommissioning (Local Law 87). The Mayor's Office of Sustainability developed the Retrofit Accelerator to act as a third-party advisor to building decision makers, connecting them to services and incentives to drive energy efficiency improvements in the City. Originally, the Retrofit Accelerator reached out to building owners using energy potential from building performance data, combined with other metrics related to public health and affordability, but they were dissatisfied with this approach because it felt like cold calling, and the conversion rate from contact with a building to engagement with the Retrofit Accelerator was not high. They now run campaigns targeted around project types, including packaged solutions. These campaigns are developed based on the inventories of fuel

[8] SFEW is part of a Local Government Partnership with PG&E, under which it can obtain customer energy usage information.

sources, equipment, and recommended energy conservation measures that come from audit reports.[9]

- The District of Columbia Sustainable Energy Utility (DCSEU) connected building performance data (EUIs, ENERGY STAR scores) with proprietary customer information (contact information, project history, and sometimes more granular energy usage). It used this information to prioritize outreach to building owners based on high energy savings potential, and then developed visualizations (Image 1, next page) that helped staff to engage owners and property managers. DCSEU conducted 23 one-on-one meetings to show its customers their performance relative to peers, and discuss options for improvement. These meetings came after there was some degree of prior relationship, and were resource intensive. However, DCSEU identified 14 energy savings opportunities and building owners pursued 10.[10]

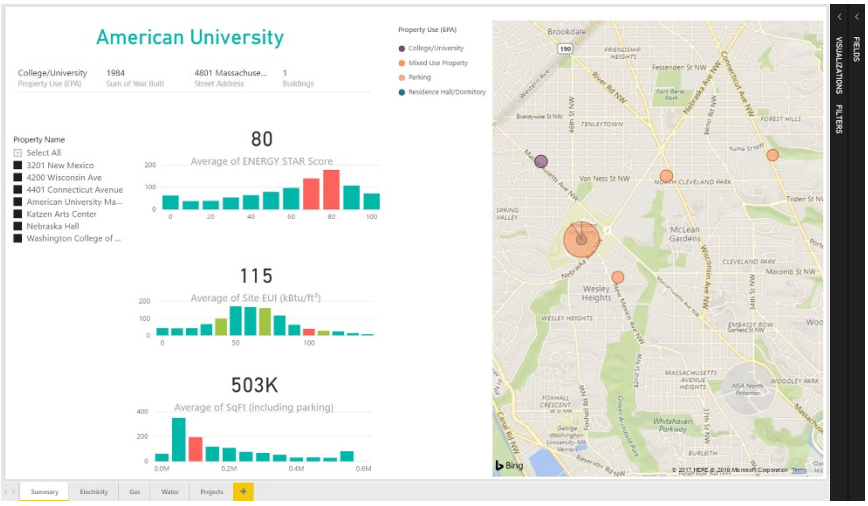

Image 1: A sample of the DCSEU's internal, proprietary visualization interface, as referenced in the IMT case study "Increasing Customer Engagement with Data: District of Columbia Sustainable Energy Utility."

- Minneapolis is starting to share its benchmarking data with Xcel Energy and CenterPoint Energy. According to its 2019 Clean Energy Partnership Workplan, Minneapolis and its

[9] Institute for Market Transformation, "Successful Partnerships to Accelerate Efficiency: NYC Retrofit Accelerator," Washington, DC, 2018 https://www.imt.org/resources/putting-data-to-work-successful-partnerships-to-accelerate-efficiency/

[10] Institute for Market Transformation, "Increasing Customer Engagement with Data: District of Columbia Sustainable Energy Utility," Washington, DC, 2018, https://www.imt.org/resources/increasing-customer-engagement-with-data/ (see document for examples of visualizations used with customers).

utilities are using a combined ranking based on EUI, electricity, and natural gas usage, to identify the top 50 energy consuming buildings. The account managers from the utilities will be doing the outreach to these buildings based on this ranking

5.4 Recommendations for a City/Utility Pilot

Based on this research, IMT recommends that a city consider the following steps in structuring its pilot with its local utility:

- Develop a logic model (theory of change) for the pilot that identifies the issue, actions, and outputs the city hopes to achieve.
- Identify a trigger for outreach, such as significant year-to-year increases or decreases in energy usage, or exceptionally high EUI that suggests potential for decrease. In the case of Chicago, the city could consider engaging with ComEd to request an analysis of energy savings potential for certain buildings, based on its access to 15-minute interval data.
- Structure the overall pilot around the types of information that the city collects around ownership and property management for benchmarking policy compliance. For example, it may be better to recommend whole-building programs and retrofits rather than specific equipment upgrades (e.g., facility assessments, envelope improvements). In this vein, one program implementer recommended leveraging strategic energy management ("SEM") as a possible offering. SEM programs, which were originally designed to fund ongoing, performance-based energy management by large industrial customers, can work with a cohort of similar customers who share an energy manager funded by the utility who performs operational adjustments throughout their facilities.
- Utility customer segmentation practices do not necessarily match the building types used in Portfolio Manager. The city may need to review building types in Portfolio Manager to verify they are within a market segment relevant to the utility.
- Coordinate with the utility to obtain a single point of contact for referrals. While "warm referrals" (real time) are usually not possible, there should be no burden on the building owner or customer to conduct follow-up. Chicago should attempt to obtain as much information as possible from the building owner in the course of making contact, such as the best point of contact and the decisionmaker for making investments. The city may also look to obtain permission to share data from the building owner.

- Consider measuring common metrics that a utility might gather to assess program effectiveness, such as how many building owners received facility assessments, and whether building owners performed more upgrades or received more savings per unit of upgrade (i.e., they bundled upgrades). This will require coordination with the utility to understand both (1) the relevant baseline and (2) whether referred customers undertook the tracked actions. In the case of Chicago, the city could consider exchanging information with ComEd through a non-disclosure agreement or by using a common vendor for program implementation and outreach.
- If the utility performs the facility assessments, it will be important to work with them to ensure availability of engineering staff.

6. Conclusion

Energy efficiency program administrators are still in the process of incorporating targeted marketing, education, and outreach practices into program design to drive energy savings. While utilities and their vendors often have the capability to identify unique customer segments, challenges remain to reach decision-makers with messaging that resonates. Meanwhile, city officials are looking for additional methods to accelerate energy efficiency retrofits, particularly in low performing buildings. The City of Chicago and its partner cities have an opportunity to test whether the building performance data that is being collected through benchmarking ordinances can be deployed to reach targeted customer segments, leading to measurable energy efficiency improvements.

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Appendix A: How Cities Can Understand Their Utility's Approaches to Marketing to Enable Greater Coordination Around Energy Efficiency

A city that wants to partner with its utility to promote greater local energy efficiency may want to first target a specific market, then may look understand the following key issues:

1. Programs: what types of programs, rebates/incentives, and services the utility offers to the market segment;
2. Roles and responsibilities: what contractors and trade allies the utility works with, and which contractors are responsible for outreach versus which ones may complete facility assessments or other services; and
3. Measuring success: how the utility measures success (total energy savings, audits completed, etc.).

Having this kind of background knowledge can help the city define a pilot or collaboration that brings value to both entities.

There are typically four places that city staff can look to answer these questions:

- *The utility's energy efficiency and regulatory websites*. Most utilities have an umbrella brand for their energy efficiency services that can lead to information about more specific offerings.
- *The utility's regulatory filings*. Most utilities file detailed energy efficiency plans with their state public utility commissions that describe their energy savings goals and budgets and how they aim to achieve them. Because the requirements for filing vary by state, these reports can be difficult to find. Cities can start by looking at utilities' regulatory and rate filings webpages, which often includes energy efficiency plans. Alternatively, cities can search on their state public utility commission website, where they may be able to sort for regulatory proceedings by topic, title, or date range. Often these filings may happen on a recurring basis, meaning you can find older proceedings filed at the same time in previous years.
- *Knowledgeable experts*. This includes local experts—energy efficiency service providers and regional energy efficiency organizations (REEOs)—but also national organizations such as ACEEE that monitor utility programs and practices around efficiency.

- *Utility staff*. Most cities have a utility key accounts manager for city facilities, and this person should be able to answer some questions as well as refer cities to the utility's staff specialists in energy efficiency programs. Some utilities also host collaboratives, periodic standing meetings where they engage with national or local advocates and trade associations to report on progress and enable continuous program improvement. Cities can ask their utilities to be included in these meetings.

Based on IMT's experience, common questions the city may have can be answered through all of these avenues, however they may be answered *most quickly* through the channels identified in the following table.

	Utility Website	Utility Regulatory Filings	Knowledgeable Experts	Utility Staff
Utility's energy efficiency goals and budgets		√		
Programs the utility offers for specific customer segments	√	√	√	
How the utility segments customers			√	√
Vendors the utility works with for program implementation and outreach	√	√		√
KPIs for assessing performance of energy efficiency programs		√		√

Appendix B: Research Methodology

IMT undertook the following research methodology to produce this report:

- Conducted a high-level literature review that included resources from ACEEE Summer Study on Buildings proceedings, publicly available reports by program administrators and utility service providers, and online trade publications such as *Utility Dive*;
- Reviewed five demand-side management plans filed within the last five years by investor-owned electric utilities, focusing on those who attained top 10 status in ACEEE's 2017 Utility Energy Efficiency Scorecard; and
- Conducted interviews with a selection of individuals with experience working at utilities and in private-sector or nonprofit organizations focusing on program administration, program implementation, and ME&O/customer segmentation. The following general questions were used to guide these conversations:
    - "What is the typical role of customer service reps and key accounts reps in energy efficiency? Do they make recommendations/connections to efficiency programs or services?"
    - "Are you aware of any resources that describe common approaches to customer segmentation (industry, comparative usage or demand, propensity) that might be used by utilities to market energy efficiency services or programs? Or if not resources, how would you describe these practices?"
    - "I would like to understand metrics that utilities might use to assess success with regard to energy efficiency outreach -- which seem like they can range from audit-to-action figures, to click-throughs on emails, to the pipeline of upcoming projects."
    - "Finally, I would like to understand better the role of trade allies vs. contracted vendors in engaging customers around efficiency. It seems like, for a particular product, a utility might simultaneously be engaging trade allies to bring in projects but also leading targeted campaigns toward customers that might be interested. Is that accurate?"

Acknowledgements

Funding for this report was provided by the Urban Sustainability Directors Network Innovation Grant Fund.

Institute for Market Transformation intern Jake Duncan provided research support.

IMT and the City of Chicago also wish to thank Richard Tonielli with the ComEd Energy Efficiency Program for his support.

Additional USDN grant partners in this endeavor were City of Evanston, Illinois; City of Kansas City, Missouri; City of St. Louis, Missouri; City of St. Paul, Minnesota.

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The Institute for Market Transformation (IMT) is a national 501(c)(3) nonprofit organization that catalyzes widespread and sustained demand for energy-efficient buildings. Founded in 1996 and based in Washington, D.C., IMT specializes in driving the intersection of real estate, public policy, and technology to make buildings more productive, affordable, valuable, and resilient.

A trusted, non-partisan leader, IMT focuses on innovative and pragmatic solutions that fuel greater investment in energy-efficient buildings to meet local market priorities. IMT offers hands-on technical assistance and market research, alongside expertise in policy and program development and deployment and promotion of best practices and knowledge exchange. Its efforts lead to important policy outcomes, widespread changes in real estate practices, and lasting market demand for energy efficiency—resulting in greater benefits for all people, the economy, and the environment.

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