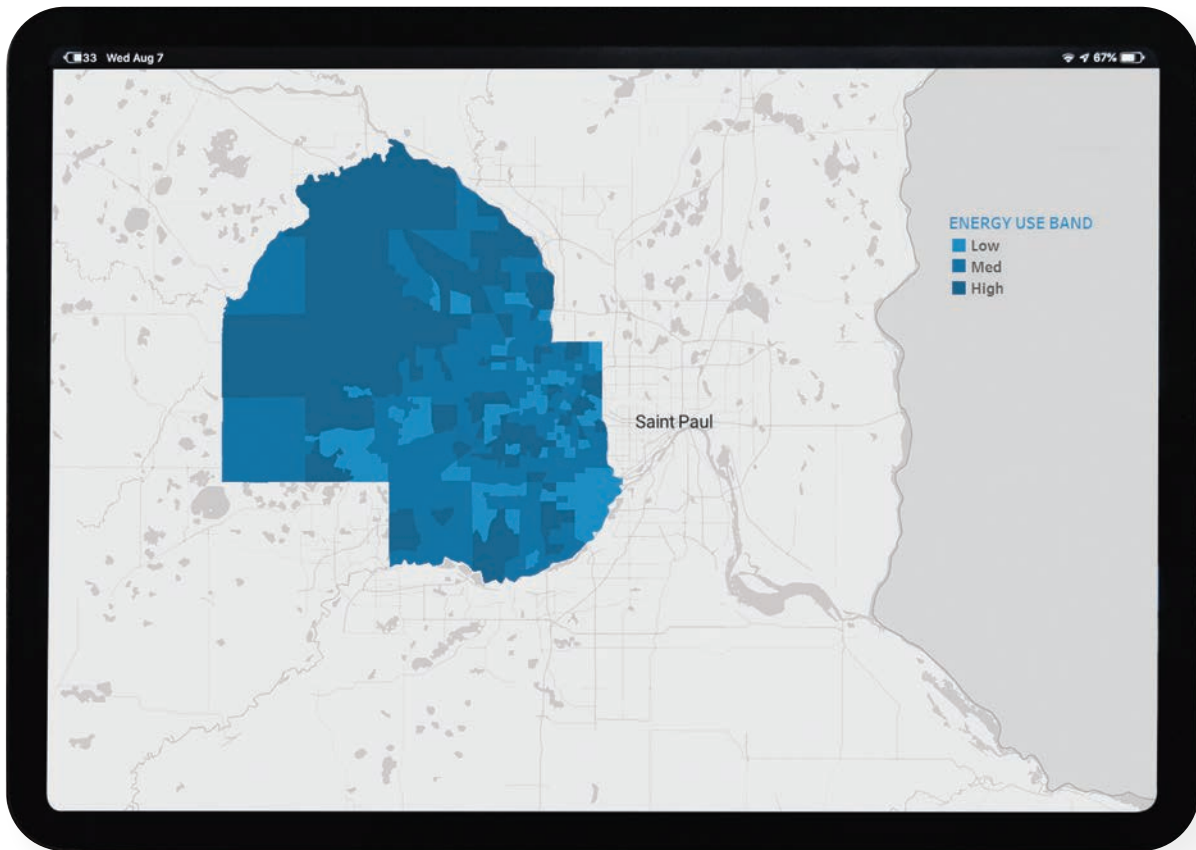


CenterPoint Doubles Down on Data to Deliver Smarter Programs



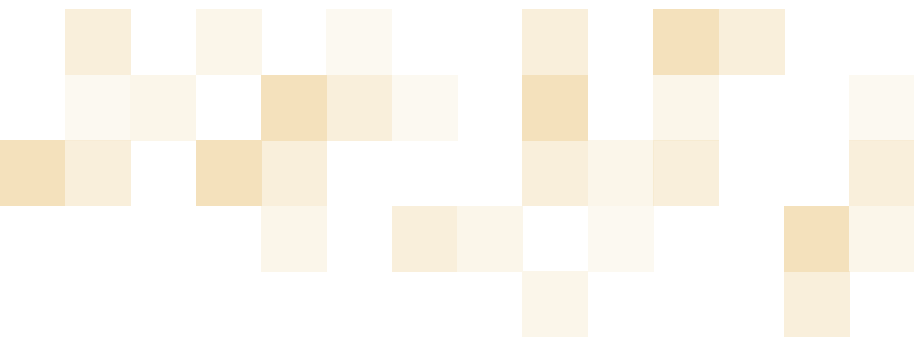
Unlike most businesses that struggle to capture information on their customers, utilities are swimming in it. However, being data rich presents its own challenges: **How does a utility, operating across multiple verticals, create an intelligence platform for decision making? What data matter? What do not? And how might data be structured for efficient and decisive action?**

Like many of his utility counterparts, Carter Dedolph, a Conservation Improvement Program Implementation Manager at CenterPoint, sought to harness data to “provide a more efficient way for energy efficiency program dollars to reach higher results.” In partnership with ILLUME, CenterPoint created a holistic customer insights dashboard to answer complex questions about energy savings and program participation, and to efficiently respond to stakeholder demands.

CenterPoint has long been interested in an energy efficiency dashboard but a confluence of factors made 2019 the right time to start—the right combination of data availability, software readiness, customer interest, and a quickly changing energy future. With the stars aligned, how did they act on this need?

CenterPoint has a wealth of customer data on energy use, program participation, and customer characteristics. However, to effectively leverage this data for decision making, it had to be contextualized with important social information and processed to meaningfully inform conclusions. ILLUME wrangled program, Census, demographic, and tax assessor data and appended it to CenterPoint’s consumption data to create a customized and nimble dashboard for its team to answer their program and strategy questions with interactive data visualizations.

With a primary and immediate goal to increase residential energy efficiency program participation, CenterPoint will continue to improve upon the dashboard to serve multiple needs. In addition to energy efficiency efforts, CenterPoint can use the tool to measure energy efficiency equity, tackle community climate goals, develop and monitor tailored marketing campaigns, and potentially harness the dashboard for DERs planning. ***With direct access to this intelligence, how will CenterPoint better serve their customers?***



A Dashboard for Energy Efficiency That Informs Planning for Emerging Trends

Energy efficiency programs help pay for products and services that save customers money on their energy bills—there aren't many downsides. So, why do some customers participate while others do not? It's complicated and caused by a variety of reasons; perhaps as many reasons as there are customers. CenterPoint would love to engage with each customer, but with limited program marketing budgets, that's not possible. With this tool, CenterPoint can identify key barriers and develop targeted strategies to increase program engagement across as many customers as possible, at minimal program costs.

The dashboard concept, which uses data visualization software and is designed to interface with the utility's servers, uses GIS information at the neighborhood-level to show trends like previous program participation. With this data, CenterPoint can target, implement, and monitor the success of programs for neighborhoods with characteristics like:

- High site-level savings (e.g., based on audits and direct-install program data)
- Relatively low past participation rates
- Key customer characteristics (e.g., home vintage, percent with limited English, and median income)

Utilities like CenterPoint foresee a variety of emerging trends that could impact their business operations in the relatively near future. Climate mitigation efforts

could completely change the energy resource mix, distributed resources could upend utilities' current resource planning practices, and, in the center of it all, customer service is paramount and needs to be provided equitably. With an energy efficiency dashboard, CenterPoint can start shaping their strategy around these disruptive and emerging trends.

Climate Goals

Like other cities and large utility customers in the U.S., the City of Minneapolis is taking a proactive role in climate action. As Minneapolis embarks on its ambitious climate goals, it has become clear to CenterPoint—as they build a dashboard to pinpoint barriers to energy efficiency participation—that partnering with the City would be a win-win.¹ The Minneapolis pilot provides CenterPoint a manageable area for piloting the dashboard before they expand it to their Minnesota service territory (while energy efficiency provides the City with direct and measurable reductions in carbon emissions). Increasing efficiency for the end-user (e.g., with insulation) is often the most cost-effective way to reduce carbon emissions. In this way, CenterPoint and Minneapolis can use the dashboard to expand current energy efficiency programs, reducing carbon emissions and gaining perspective on the potential for energy efficiency along the way (e.g., by understanding barriers to participation and the cost of overcoming them). Thinking further ahead, CenterPoint is laying the groundwork for how they can engage with other communities in their service territory.



Equity

Energy efficiency equity is an emerging and dynamic issue. A full spectrum of utility customers pay into energy efficiency programs, but a smaller percentage participate each year. This means program benefits are not equally shared among ratepayers. While CenterPoint implements robust income-eligible energy efficiency programs to address this issue, there is increasing scrutiny in the industry about the accessibility of programs across a variety of demographics. Recognizing this trend and its importance to the City of Minneapolis, CenterPoint's dashboard can support initiatives around energy efficiency equity by monitoring past trends of participation across demographics (e.g., income, age, and primary language), uncovering participation barriers, and designing campaigns to access hard-to-reach customers.

DER Planning

Distributed Energy Resources are typically discussed for electric utilities, but the same framework applies for natural gas companies as well. Smart thermostats and energy efficiency can serve as a DER for natural gas companies to avoid infrastructure upgrades in constrained areas. Implementing DERs is an emerging concept, and CenterPoint can begin to understand when and how to implement it through this tool. By identifying their areas of constrained infrastructure, they can consider the feasibility of targeted marketing based on neighborhood characteristics and past participation data. Similar to other value streams, the dashboard allows CenterPoint to monitor their progress over time.

How Did We Do It?



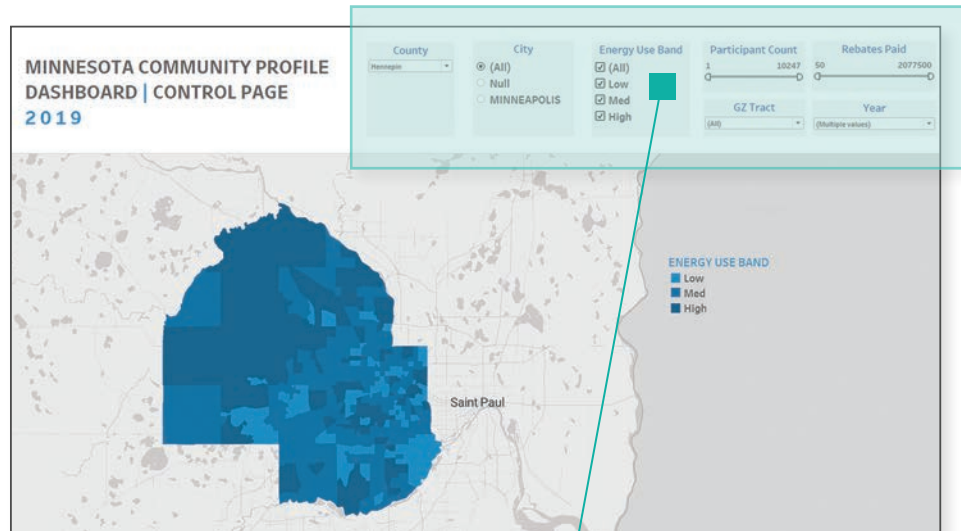
More and more, innovative energy utilities like CenterPoint are taking a page from software development and start-up culture—who live and die by the Agile methodology—to create their own software solutions. ILLUME and CenterPoint are using sprints (or phases) that hold the team to fast and hard deadlines as they build the dashboard. Each phase ends with a working software prototype (or minimum viable product). At each phase, no matter how finished or un-finished the product, the project team has an opportunity to provide rich feedback and reflect on where the project should go next. Throughout this process, ILLUME is working with CenterPoint to iterate on the dashboard tool while tracking ideas that could be used for future phases.

How Does it Work?

1

Map Interface:

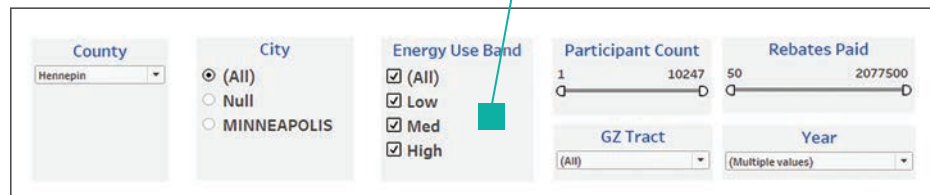
The tool is designed to incorporate metrics (by Census tract) alongside an interactive map. The map displays energy use quartiles across the tracts and users can scroll over each Census tract to learn about the proportion of multifamily versus single-family homes, for example.



2

Filter on Key Parameters:

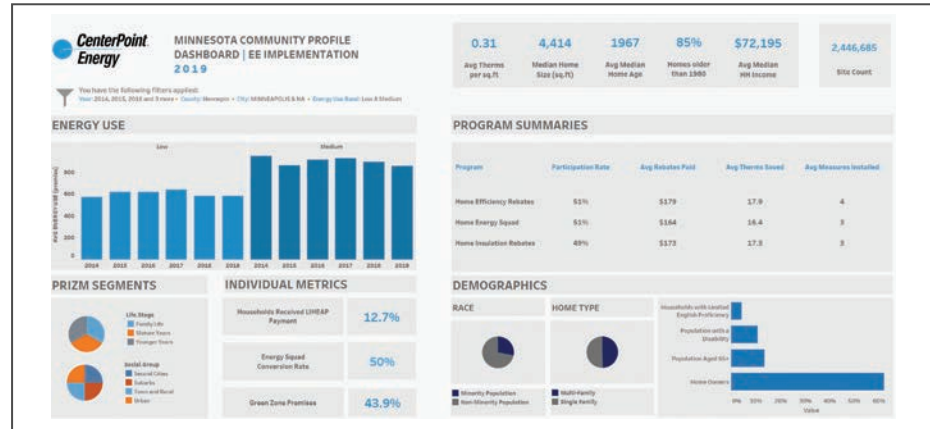
Users can then set key filters for customer characteristics (e.g., median income), savings opportunity (e.g., home vintage and size) or historic program activity (e.g., energy efficiency conversion rates).



3

Review Additional Metrics:

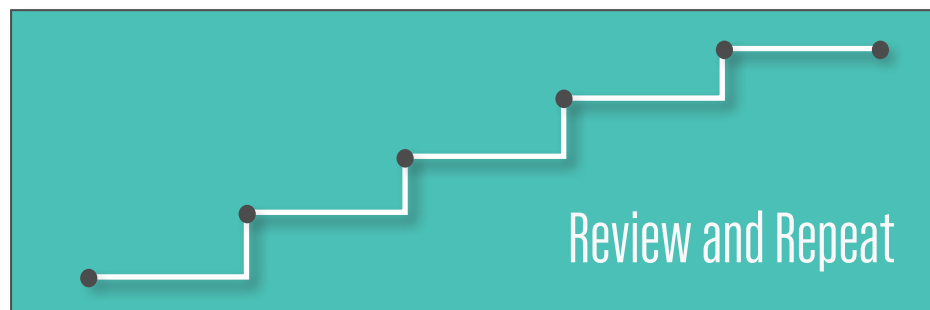
After setting filters, users can review additional metrics on a second dashboard page to inform their program marketing strategy (e.g., the percent of residents with limited English).



4

Targeted Implementation:

Lastly, users will implement their strategy and revisit the tool to monitor their progress and continue to refine their approach.



As consensus on the key data fields associated with energy efficiency and how to tap hard-to-reach customer segments builds, for now (Phase 1 of the project), the analysis team is collecting tax assessor data, energy usage data, and customer characteristics available to CenterPoint, such as Census data and past energy efficiency program data.

The team is balancing the costs and benefits associated with introducing additional data sources, data fields, and more advanced analytics (e.g., estimating customers' balance temperatures or propensity modeling) in future phases.

1. "Minneapolis Clean Energy Partnership." *Minneapolis Clean Energy Partnership* online. Accessed October 3, 2019, mplscleanenergypartnership.org/.