UTILITYAI

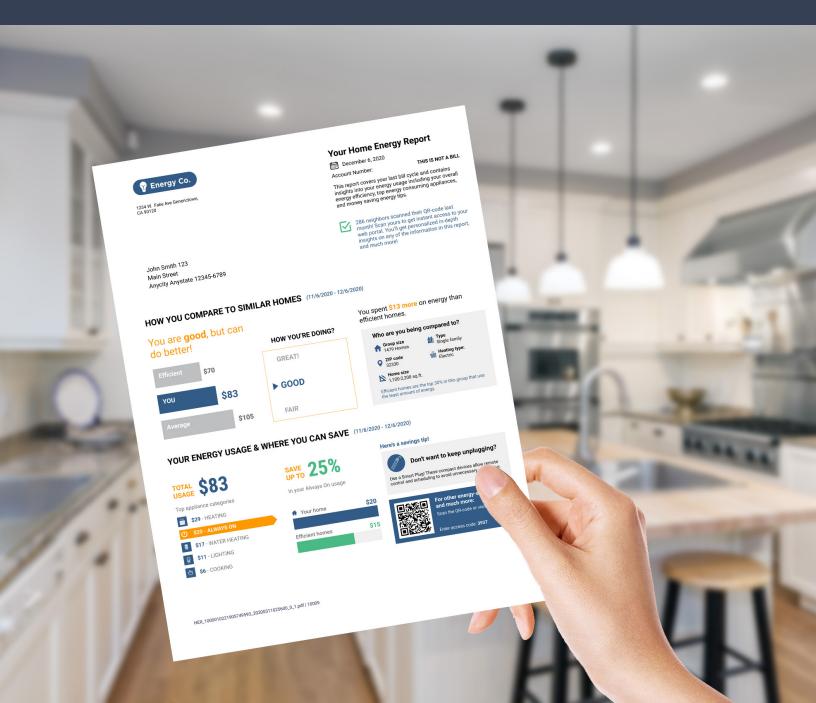## FOR HOME AUDITS, ENERGY EFFICIENCY, CALL CENTER, PROGRAM PLANNING AND MORE

An NV Energy Case Study

ABOUT NV ENERGY

NV Energy serves nearly 1.3 million electric customers throughout Nevada and 168,000 natural gas customers in the western part of the state. As a Berkshire Hathaway Energy Company, the utility's number one principle is customer service.

"We really try to understand what our customers want. We don't try to tell them what they need. We listen," says NV Energy's DSM Program Delivery Manager Adam Grant. "Of course, we understand from a utility standpoint what we can provide, but we listen to what the customers want and then try to build services around their needs."

CHALLENGE

In keeping with that **customer-centric approach to energy management**, NV Energy is continuously looking for ways to foster a two-way dialogue with its customers so that it can learn from them as a means to improve customer engagement and satisfaction and institute programs that achieve mutually beneficial improvements in energy efficiency.

The utility also sought real-time customer account integration to ensure that any change in customer data — disaggregation analytics, survey answers, home audit results, call center outcomes, etc. — would be reflected immediately in the customer record, creating what NV Energy terms a "single source of truth." Their goal was to both ensure that the customer always sees up-to-date information, as well as enable multiple NV Energy business units to improve their operational efficiencies. For example, call center agents would view the same energy data and usage insights that customers see to assist in call resolution, and field auditors would use the data and insights to better prepare for in-home energy assessments.

SOLUTION

Since 2017, Bidgely's UtilityAI™ has helped NV Energy better connect with customers and deliver programs more successfully, realizing gains across operational areas. They have implemented a wide-range of UtilityAI-informed solutions. As Grant says, "We are consistently engaging with the touchpoints that Bidgely offers."

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INSIGHTS DASHBOARD AND HOME AUDITS - 2017 AND 2018

The NV Energy-Bidgely partnership kicked off in 2017 with the rollout of a UtilityAI-powered online portal called the "Insights Dashboard" that provided NV Energy customers with:

Appliance Disaggregation - By applying artificial intelligence and machine learning principles to AMI data, the Insights Dashboard provided an itemized view of home energy usage and enabled customers to dynamically see which of their appliances consume the most energy.

Personalized Energy Savings Tips - Appliance-level savings tips are personalized to each home based on a sophisticated scoring mechanism that includes appliance consumption, efficiency and cost for maximum relevance. Customers are able to save tips and improvements that they'd like to do "I'll Do It" as well as mark completed improvements "I Did It", which will hide those completed tips from future view.

Similar Home Comparison - Customers see their whole-home and appliance-level consumption in comparison with homes of similar size, location, occupancy and other demographic factors.
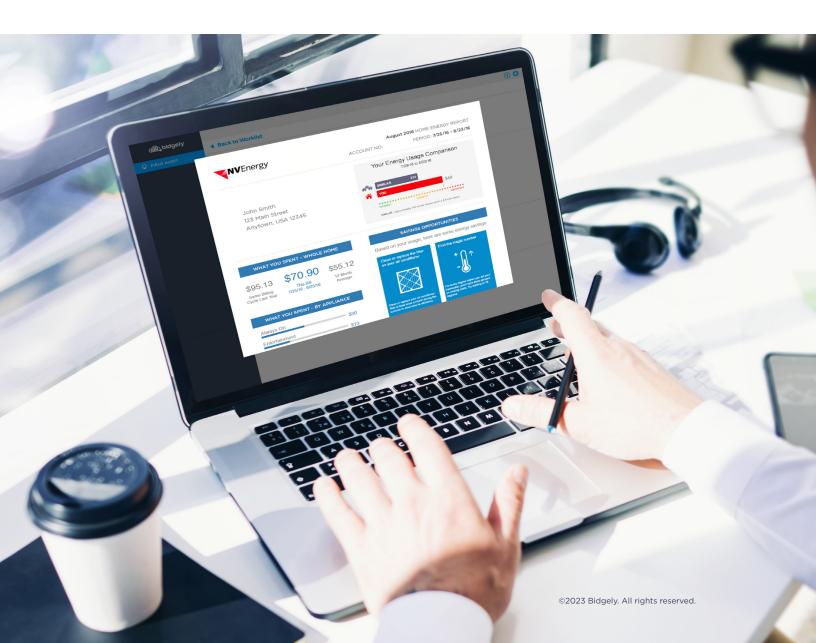
The Insights Dashboard also included a next-gen Home Assessment Survey developed to improve upon traditional surveys. Using artificial intelligence, UtilityAI pre-populates many survey questions for the customer automatically -- such as data about appliance ownership, sizing and efficiencies. Customers are then able to review and enhance the pre-populated responses, yielding a more accurate survey with minimal effort and an overall better user experience.

Grant says the success of the Insight Dashboard can be attributed to simplicity and data-driven customer engagement. "The Bidgely tool we started with gave us the best opportunity for the customers to really understand simply and easily okay where is my energy usage going? And on top of that how can I better my energy usage and control it myself."

NV Energy then expanded the Insights Dashboard Home Energy Assessment's value proposition by making it the foundation of it's in-home services program where it could be used as a walk-through piece when an energy auditor is in a customer's home.

Launched in January 2018, the **In-Home Energy Assessment** is an online, tablet-based tool that replaces traditional paper and pen. Whereas legacy home audit programs required auditors to enter a home visit "blind," the UtilityAI-powered In-Home Energy Assessment does as much analysis as possible in advance, providing auditors with disaggregation insights that they can use to identify any potential issues and validate assumptions before they enter the home. Then, the platform guides the auditor through essential home survey data fields, while also allowing the auditor to add custom tips and recommendations based on their expertise and experience. Once complete, the audit results are automatically synced with the customer's account to ensure each customer record stays up-to-date. The result is shorter audit completion times, lower operational costs and better CSAT scores driven by auditors' more proactive and knowledgeable approach.

NEXT-GEN HERs - 2018

In 2018, NV Energy introduced UtilityAI's **Next-Gen HERs** program, sending UtilityAI-informed paper reports to 200,000 customers and achieving a first-year savings target of 13 GWh in the first six months.

In 2019, the program was expanded to include 300,000 customers and report delivery via both paper and digital channels. A program evaluation conducted conducted at the time by ADM revealed that customers who received both Next-Gen HERs paper+email reports saved 1.8X more than customers who received paper alone.

Based on these impressive results underscoring the efficacy of digital HER delivery, NV Energy made the shift to a more digital-centric Next-Gen HERs program through which customers for whom the utility had email addresses stopped receiving paper reports but continued to receive email reports, and those customers for whom the utility had no email address continued to get paper. The digital-only Next-Gen HERs customers continued to deliver superior outcomes, with 50% of customers consistently opening their emails and demonstrating high customer satisfaction ratings as assessed by third party evaluators.
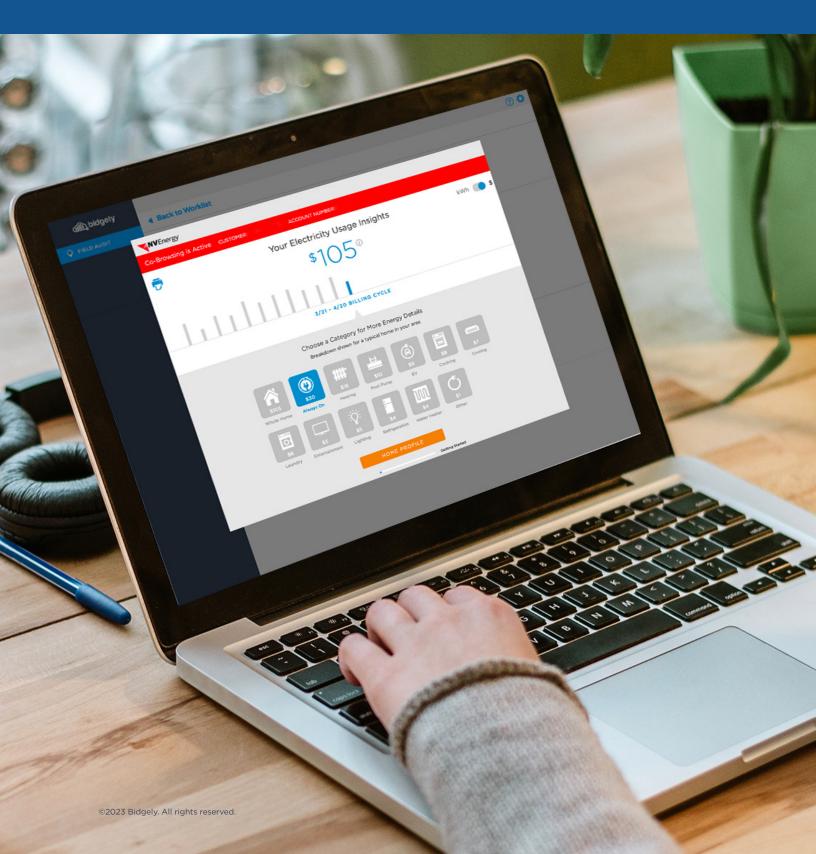
As of December 2022, the Next-Gen HERs program has yielded 30+ GWh in savings, with 91% of customers now receiving digital HERs that have achieved 50% open rates.

CARE CALL CENTER SOLUTION - 2019

NV Energy also rolled out Bidgely's **Customer CARE call center** tool in 2019 to ensure that its call center representatives could also leverage the UtilityAI platform to better diagnose customer energy use problems and deliver more personalized service to every customer who calls in.

2019 also marked the next phase in the Bidgely-NV Energy partnership with the introduction of proactive **program targeting** and outreach to customers to alert them about potential issues and offers for solutions.

"We've gotten a lot of really good feedback," Grant says about the personalized outbound communications. "We regularly hear things like, 'helping me as a customer to find the most optimal way to do things has been a really good thing.'"

Beyond delivering an uplift in customer satisfaction, UtilityAI's personalized, relevant communication capabilities have also revolutionized the success of NV Energy's program participation targeting.

"We ran into some really good opportunities to target our customers and get the most value out of our customers based on AI-powered intelligence that told us when specific appliances were using more energy than their neighbor's appliance or than a properly functioning appliance should have been," Grant explains. "Maybe there was something wrong with their air conditioner, or we could tell that they had a single speed pool pump vs. a variable speed pool pump. Those insights gave us an opportunity to offer a solution to customers who either have a problem or who don't have the equipment that is most optimal or most efficient. We could take what we knew about precisely where and why they were inefficient and try to help them become more efficient."

Using UtilityAI's Analytics Workbench targeting capabilities, NV Energy piloted an **HVAC efficiency program** that identified the top 50,000 customers not already engaged in a utility program who would benefit from HVAC replacement based on certain high HVAC energy usage patterns.

Based on the success of the HVAC program, NV Energy built a similar **Energy Efficient Pools and Spa program**. UtilityAI was used to disaggregate AMI data to reveal pool pump appliance ownership and consumption and identify single speed pool pump owners who had the highest savings potential. The utility targeted this group with outreach to encourage upgrades to more efficient devices. At the same time, they sought to identify which homes were running their pool pump during peak hours as priority targets for the utility's load shifting initiatives.

"There are 200,000 pools in southern Nevada and only 20 percent of them are efficient so far," explains Grant. "So we used UtilityAI to identify the most inefficient pools with high energy usage pool equipment. We targeted those 75,000 residential customers, telling them, 'You seem to be using a lot of energy for your pool, we can help you.' It was incredibly successful."

Grant adds, "Because of the targeted aspect of what we're doing, learning and working with these customers, this is not blanket marketing. It is specific to these customers, about their needs and their individual situation. When we look at what we're trying to become for our customers, we don't want to be NV Energy, the utility who sells us power. We want to be regarded as an energy advisor that they look to as the experts. We work extremely hard to be partners with our customers, to teach them ways to use, ways to save, best optimizations for things that they can do for their energy needs and uses.

As a guiding philosophy, NV Energy has used UtilityAI to create a **personalized experience for every customer to increase engagement and satisfaction**; leveraging insights into customer behaviors, preferences, and needs to drive NV Energy customer intelligence strategies and customer adoption of new programs and services; and encouraging integration of the program's analytics to provide quantitative inputs for multiple NV Energy business units.

This approach has paid dividends across the utility. UtilityAI allowed NV Energy to simultaneously streamline marketing efforts and expenses, maximize the energy savings earned per paid incentives, and enable grid optimization through load shifting.

NVE HAS LEVERAGED UTILITYAI'S FULLY-INTEGRATED SOLUTION TO DELIVER:

Appliance Disaggregation for personalized recommendations and alerts

Home Assessment Surveys that are informed by energy disaggregation to pre-populate survey questions resulting in 80 percent completion rates.

Field Auditor Tool to collect in-home audit data that automatically syncs to relevant utility databases at headquarters

Home Energy Reports - Digital & Paper Reports for Energy Efficiency Savings

Customer Care Co-Browsing to allow call center service agents to view the same energy data that customers see to support a positive resolution to calls

Program Participation Targeting to identify customers most likely to opt into specific programs, purchase new equipment, or such as in-home audits and rebates

Grid Optimization with analytics to inform grid planning and drive TOU rate adoption to shift loads

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