Using data science to rethink customer programs: A fireside chat with the Institute for Electric Innovation

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Earlier this summer, E Source CEO Ted Schultz sat down with the Institute for Electric Innovation and Portland General Electric (PGE) for a fireside chat as part of the Thought Leaders Speak Out 2021: Engaging Customers with Technology series. The program brings together utility executives to share results and lessons learned from successful customer-engagement projects.

Ted shared how we've helped PGE apply our predictive data science services and solutions to quickly scale its Peak Time Rebate program. By evaluating individual customer energy and behavioral profiles relative to the program's objectives, PGE grew the program to be a more reliable, cost-effective resource. Adding to the discussion moderated by Bob Rowe, CEO of NorthWestern Energy, was John McFarland, chief customer officer at PGE.

"How do you start to treat customers as individual users and find the ones where the program really resonates?" —John McFarland, chief customer officer, PGE

Since the Peak Time Rebate program launched in 2019, PGE has enrolled about 12% of its residential customers. John looked back at the early days of the program, reflecting how it started in 2016 as a small pilot with around 14,000 customers. The goal was to enroll a diverse group of customers with the hope that it would average out over time with highly engaged customers, offsetting those with little or no engagement. Even broad demographic segmentation to improve performance resulted in a wide range of outcomes.

"How do you start to treat customers as individual users and find the ones where the program really resonates?" John inquired. PGE was searching for a way to tailor programs for customers so that the utility could drive satisfaction and savings for customers while also gaining predictability for the grid and ensuring it was managing cost-effectiveness measures.

E Source Data Science president Ted Schultz explains how OneInform helped PGE identify and engage the best customers for its Peak Time Rebate program

Enter the expertise of data science company E Source and OneInform, a suite of AI-powered solutions that focuses on helping utilities jump the technology curve to take advantage of predictive data science.

OneInform unlocked PGE's advanced metering data to build energy profiles of every customer. It then fused the customer data with E Source proprietary external data to build a well-rounded behavioral profile. The result was a set of virtual customers that PGE could understand at an individual level to find the best customers for the program.

OneInform focuses on helping utilities jump the technology curve to take advantage of predictive data science.

"The key is looking at each individual customer relative to the objectives of the specific program," Ted explained. In the case of PGE's Peak Time Rebate program, OneInform identified the best customers in two cohorts representing 12% of PGE's customers and 50% of the program's market potential. After working with OneInform for one year, PGE saw the numbers increase to 14% and 60%, respectively.

Once the OneInform data science services team identified the best cohorts, it used the profiles to create micropersonas of the customers, which PGE used to personalize its messaging and reduce acquisition costs. By recruiting the best customers for the program, the amount of load shifting improved by 51%, with a reliability factor of ±10%, making it a reliable resource for managing load. The combination of reduced acquisition costs and dramatic improvements in performance and reliability meant optimal cost-effectiveness for the program.

"This has been as good of an example of going from pilot to scale with quality results as I can think of in our industry," moderator Bob Rowe summarized. "Effective targeting with data science leads to greater customer satisfaction—something we all care about—and lowering customer acquisition costs."

Data science helps PGE identify and engage the best customers for the Peak Time Rebate program

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