Get Out The Watt! Drawing Parallels with a GOTV Campaign and Influencing Behavior for Results in Energy Efficiency

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Introduction

The intersection of big data, social data, primary research, and analytics has proven to be a sweet spot for several industries/verticals, including the recently concluded presidential election campaign which was a great example of a program that leveraged information and deployed advanced analytics to get desired results. Are utilities mining the information they have at their fingertips to understand their customers better and use this understanding to design programs that enable more effective engagement? This poster presents a first-hand account from the perspective of a target audience and a volunteer for the campaign, is augmented by supplementary research, and is informed by the author's experience with advanced analytics.

Database Integration

Database integration is a foundational step combining party affiliation, geographic information, past financial support, volunteering efforts, requirements for assistance etc. into one large database accessible to different arms of the campaign. While some of this is available to the party from its own records, it may be augmented with purchased data as well such as social media usage, cell phone usage, lifestyle segments etc. Drawing a parallel, this database integration would be equivalent to utilities maintaining one master customer database that collated billing, payment, account services, and marketing databases to have at their fingertips a holistic profile of a customer on aspects such as energy consumption, whether customers have been delinquent on payments, preference to receive electronic bills, typical mode of bill payment (check, draft, online debit, online credit etc.), customers who might have availed of rebates on past programs, signed up for TOU rates or levelized billing plans, low income customers requiring bill payment assistance, aged/disable customers who indicate that disruption in service might be detrimental to their well-being etc. This is just a sampling of the information that utilities have on their customers. This can be further augmented with purchased information regarding cell phone usage, presence of solar, EV ownership and many other such variables that are relevant to customer behavior, attitudes and needs with respect to energy consumption.

Program elements may be tailored and localized to increase relevance using geocoding and mapping. Akin to directing volunteers to the nearest phone center and voters to the right location to vote, energy efficiency programs can adopt a parallel approach that provides specific local information to customers that spurs action. For example: providing resources that direct consumers to retail channels that carry rebated energy efficiency appliances within a X-mile radius. Utilities possess tracking data for EE measures that can be used for this purpose.

Methods

Cluster analytic techniques are used to identify distinct segments of voters that exhibit similar patterns in the above variables. Developing segments allows programs to tailor messaging to groups rather than employ a one-size fits all approach. Predictive models are used to identify high probability targets for all desired outcomes from simply casting a vote in favor, to fundraising, to volunteering etc. Similar

approaches may be employed to develop customer segments and also develop propensity scores for customers to participate in a program, reduce consumption, load shift etc. Segment profiles also provide seed information for marketing and messaging optimization. For example: Receipt of electronic bills and scheduled automatic online bill payments might be a proxy indicator of receptivity to smart energy offers such as TOU rates. Customers exhibiting this pattern of data might cluster together in a segment and be likelier to adopt SEOs than those lacking a threshold level of technology use.

Segment profiles are useful to allocate marketing spend by channel and allow tailoring of messaging by a priori needs known for these segments. For example, the campaign ascertained higher probability donors and prioritized outreach accordingly or those who required assistance in getting to the polling place and reassured voters that they would receive the support they needed. Similarly, utilities can use customer profiles and indicators such as billing payment assistance or disruption detrimental indicators to explain the benefits of SEOs such as TOU rates in terms that appeal to those particular segments such as more competitive rates that could reduce the size of the bill for the low income groups or increased reliability via shorter outages and remote assistance for the elderly/disabled.

Implications

Normative behaviors are leveraged and social networks are used to amplify performance. Increased voter turnout can be attributed to the network effect just as comparative home energy reports have used peer group comparisons to generate anywhere from 1%-3% energy savings. Customer information is updated dynamically with each contact, inbound or outbound, and the process may be described as one of continuous enrichment and refinement. Notwithstanding privacy issues, as our ballots are subject to privacy regulations just as our energy consumption information is, an effective GOTV/GOTW campaign can employ a data driven strategy to achieve its goals.