Conquering Leakage, Breakage and Equitable Allocation by Dialing-Up Big Data

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ABSTRACT

Traditional rebate program models in retail are clunky and expensive, requiring utilities to verify customer residency along with 'laundry lists' of information. Well-executed markdown, point-of-sale, and upstream program models reduce the burden on the participant, but lack reliable methods for allocating sales and the associated savings. Utilities frequently either pay for sales they can't claim (leakage) or exclude stores in border territories. These models tax utility budgets and stretch program cost-effectiveness to its breaking point. Surely we can find a way to leverage the Big Data retailers collect with every credit card swipe? Could we use these data to improve customer participation and program evaluation?

This paper will present the Retail Sales Allocation Tool, a tool developed to address varying program and evaluation needs of utilities in the Pacific Northwest region. With 135 NW public utilities and six investor-owned utilities, this project engaged a diverse group of stakeholders and developed a methodology to transparently and equitably allocate program-generated sales (and savings) from any store in the region. Using a combination of demographic, psychographic, GIS, and customized algorithms, the tool models retail sales by location with uniform inputs that can be applied to any area, retailer type, or product.

While the initial goal of the project was to solve for utility service territory overlap, the tool has realized additional benefits including better targeting of marketing, more rigorous program planning, improved confidence by evaluation and utility commission oversight, and more refined program costs and savings forecasting.

Introduction

Midstream and upstream retail energy efficiency programs face challenges of low net-to-gross ratios (NTGR) when running programs across utility service territory boundaries. These programs provide incentives to encourage consumers to purchase more efficient products (i.e. CFLs, LEDs) but can't predict precisely where that product will be installed. In general, most utilities don't want to pay for savings that travel outside of their service territory and refer to this as program "leakage." The Pacific Northwest contains 141 utilities (public and private) across seven states (Oregon, Washington, Idaho, Montana, Wyoming, Utah and California). In 2011, residential program leads from three coordinating partners, PacifiCorp, Bonneville Power Administration (BPA) and the Energy Trust of Oregon (Energy Trust), came together to develop a tool that could meet the needs of individual programs while also serving the needs of a larger multi-regional effort to a) capture all program-influenced savings, b) avoid low net-to-gross ratios (NTGR) and c) avoid double counting of savings. Working with the non-profit energy efficiency firm PECI, partners from PacifiCorp, BPA, and Energy Trust collaborated to develop a methodology to address issues of leakage, breakage (unclaimed or unreported savings) and

service territory overlap, but ended up with a tool capable of much more. What follows is each partners' initial interest in the project, a detailed description of the Retail Sales Allocation Tool (RSAT), the "Big Data" and other inputs that went into the tool, how it's being used today and future potential development. The challenges these partners sought to solve included reducing incentive program leakage, reducing breakage, and prioritizing efforts in retail locations with the best program return.

Why This Project Was Important

PacifiCorp: Is That My Customer?

In 2006 PacifiCorp redesigned and launched expanded residential energy efficiency programs in Washington, Idaho and Utah. Prior to the redesign, PacifiCorp's residential lighting strategy focused on CFL kits and coupons for CFLs distributed by U.S. Mail. Response rates for the mail-based strategies never topped more than 30%. In a mid-or-upstream model, retailers and/or lighting manufacturers receive incentives to lower wholesale prices that magnify price reductions at retail for the incented CFLs. In search of lower acquisition costs, higher response rates and greater impact of program dollars, PacifiCorp opted to pursue an upstream lighting strategy.

Early on, strategies to minimize purchases by non-utility customers (leakage) were not very robust. To minimize leakage at the start of an upstream effort, utilities often avoided retailers at the edge of the service territory where sales might end up leaking into a neighboring utility territory. Other methods included simply drawing a circle around a retail location with the radius of the circle estimating distances to the store for the majority of its customer base. These distances were often no more than guess work based on personal experience or estimates of distance and travel time. During evaluation, data were gathered to determine how many utility customers bought incented product at each of the retail locations. The most reliable method at the time involved asking people to identify their electric utility as they left the store. Evaluators used the survey data to calculate a net-to-gross ratio (NTGR) for discounting the lighting savings acquired through upstream channels. After watching some utilities get penalized as much as 50% on their NTGR for their upstream lighting incentives, PacifiCorp wanted a more accurate way to screen and select retailers for upstream lighting program participation to minimize purchases by non-customers.

To launch the expanded and redesigned programs in Washington, Idaho and Utah in 2006 PacifiCorp hired PECI and challenged them to come up with a screening process to focus lighting promotions on retailers with the majority of customers coming from PacifiCorp service territory. To accomplish this, the initial version of the Retail Sales Allocation Tool (RSAT) was developed in 2007, using publicly available data to develop utility and retailer overlap. These data were also used to inform the Pacific Northwest's Change a Light program, a region-wide CFL buy-down program. PacifiCorp and PECI refined the tool and settled on a retail lighting strategy to target only stores with 90% or more of sales coming from customers within PacifiCorp's service territory.

BPA: Requirements of the Federal Power Act and 135 utilities

In 2011, BPA's interest in the RSAT was driven by two daunting goals: to meet public power's share of the conservation targets set by the Northwest Power Act[1] and to work transparently and equitably with 135 public utilities. Every five years, the Northwest Power and Conservation Council's Power Plan provides an efficiency target for BPA and the region's utilities. In the Council's Sixth Power Plan, the public utility share of the 1200 aMW goal was 504 aMW (NW Council 2010). This ambitious goal was nearly twice the target of the last plan and tasked BPA and its utility partners to develop new ways to acquire energy efficiency.

Like PacifiCorp, BPA was concerned with program leakage, but for different reasons. BPA identified a cache of potential savings resulting from unclaimed sales of energy efficiency products considered "leakage" by large investor-owned utilities (IOUs). For years, small public utilities operated their smaller energy efficiency programs in the shadow of their larger neighboring IOUs, often lacking program staff capacity to partner with them. BPA recognized this as an opportunity to provide support to small public utilities at a regional level. By working with IOUs and on behalf of small and mid-size public utilities, BPA created the Simple Steps, Smart Savings® program, a multi-state lighting and showerhead promotion, to share and leverage energy efficiency program influence across the region. BPA recognized that what one utility was unable to claim, might be claimed by a neighboring utility. By remaining agnostic to who influenced who, neighboring NW utilities had the potential to work together and maximize what could be counted and also avoid double-counting savings. Still, partnering with six large, IOUs and 135 independent public utilities ranging from large (municipals/public utility districts with 400,000 meters) to very small (co-ops with 4,000 meters) required an approach that addressed the needs of the region as a whole.

Another very compelling opportunity was the possibility of reducing program costs. For years, lighting programs have enjoyed lower program delivery costs because they operate in a mid-stream program model. Appliance rebate programs have historically relied on downstream rebates to the consumer, using incentive forms to confirm the appliance installation address. For appliance programs to enjoy a more efficient program cost structure, we first had to develop a reliable methodology for allocating energy efficiency appliance sales to a given utility service territory without requiring the use of customer-submitted incentive forms. BPA had heard about the sales allocation methodology under development for PacifiCorp and launched an effort to expand that work to benefit all utilities in the region.

Energy Trust of Oregon: Cost Effectiveness

Energy Trust of Oregon has been utilizing the RSAT in their New Homes and Products program since 2009. Energy Trust represents the investor-owned utility share of the market for the state of Oregon, and is intertwined with over 30 public utilities. The RSAT was originally used to assign a split of the customers of retailers between utility providers in the state. This was used to allocate costs incurred and savings achieved between utilities at each retail location to the appropriate utilities. Keeping a handle on costs was an important factor. For programs like Energy Trust's, the RSAT provided a method to determine allocations in a way that was analytically sound and unbiased. When multiple utilities use the same tool in a region, it helps ensure that there is no under or over counting of regional savings.

[1] The Pacific Northwest Electric Power Planning and Conservation Act of 1980

The Tool

What is the Retail Sales Allocation Tool (RSAT)?

The goal of the Retail Sales Allocation Tool (RSAT) was to provide utilities a way to allocate sales of energy efficient products from a retail store to the surrounding utility service territory(s) when installation data is not captured. It was designed to work with midstream or upstream retail program models that do not require customer or site-specific installation information such as addresses. However, it needed to stand up to evaluation, ensure that the savings realization would be accurately modeled by location, and that it could be applied to a range of retailers and products.

To develop a methodology to create the tool the project began by interviewing regional utility stakeholders to understand their program needs. Then, the project team researched product profiles and retailer profiles. The initial methodology also used the Buxton Urban Density System (BUDS 2013) a measure of population density that describes the differences among highly rural areas and highly urban areas. BUDS accounts for population density decay that occurs when moving further from an urban center by examining population per square foot.

The RSAT utilizes a diverse set of inputs including the geographic location of a store, the topography surrounding the location, characteristics and demographics of the population, brand loyalty of stores, and the level of purchasing decisions required of a product. Other inputs used to create the tool included: GIS data, estimates of distance and travel time by product, census data, 71 consumer profiles (Experian 2014), utility service territory zip codes, and the characteristics of each stores' consumer population. The RSAT output is in the form of an Excel spreadsheet with filters capable of creating allocations of sales of a select group of products for any NW utility, at any of the 11,368 retailer locations included in the first version. This expanded, regional version of the RSAT is currently maintained through funding from BPA, with funding support from PacifiCorp and Energy Trust, and is available to any northwest utility for program testing and utilization.

Allocations generated by the RSAT are unique to each retailer location, retailer type and the product category. For example, a Home Depot store will have one allocation for White Goods and a different allocation for Over the Counter (Plug and Play) products. A Costco in a specific locale will have a different allocation for a CFL (Over the Counter) than a grocery store in the same area. What follows is more explanation of the inputs and how they function within the tool.

Technical capabilities of the tool. Certain factors were identified early on as necessary design considerations for ensuring the tool performed with precision. These factors included the type of product being purchased, each unique retailer environment, proximity of other retail locations and demographics of households in each territory. The tool also had to consider drive time, urban density around the store, impacts of geographic features and road networks. The analysis assumed that the way consumers interact with retailers could be described by a model of a store's trade area, the geographic region around a store where most potential customers live (i.e. where the majority of purchases are installed). A GIS analytical platform was used to capture inputs

that may influence a trade area, then to model specific trade areas in order to quantify and characterize the households within it. The factors that were used to create this analysis are included below.

GIS platform. The methodology rests on an integrated geographical analysis tool that provides customer profiling, catchment definition, and sales territory analysis. The platform blends layers of data used for the methodology including urban density, household segmentation, census and demographic variables, measure of geocoding precision, as well as several proximity modeling tools.

Trade areas. Traditional retail analytics examine populations within a linear proximity to a location. However, analyzing the area within a simple radius around a location fails to accurately reflect factors that influence the draw of shoppers to a store. The Retail Sales Allocation methodology's trade areas model the geography near a location from which customers are traveling based on drive time. Using drive time to calculate trade areas naturally incorporates important factors such as urban density, geographic barriers such as bridges, and street networks. Drive time is also a natural descriptor for consumer behavior, in that a consumer is willing to drive different lengths of time for different retail experiences. The drive time input is the main component for this methodology and is superior to the simple radius approach to a trade area model as shown in Figure 1. Notice the difference between the areas captured by the simple radius versus the 22-minute trade area based on drive time. The resulting model captures the nature of household travel times to different retail locations.

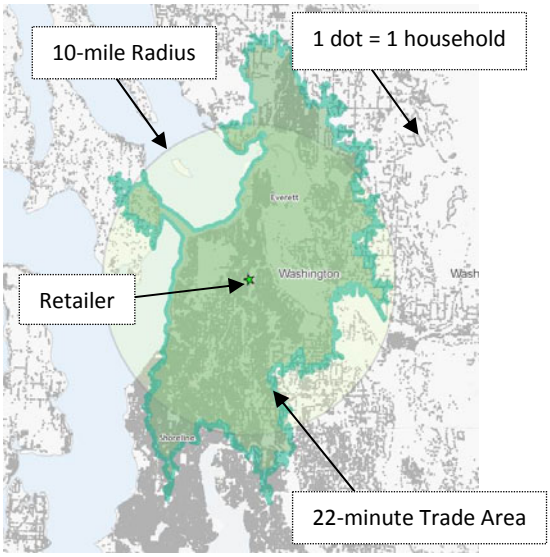

Figure 1. Trade area vs. distance radius.

Retailers. The North American Industry Classification System (NAICS) is the federal standard used to classify businesses for the purpose of collecting, analyzing, and publishing statistical data in the United States (U.S. Census 2012). NAICS codes were used to classify the retailers included in this project to help identify which trade area assumptions will be shared between

retailer types. Retail categories currently in use include: Neighborhood Convenience, Home Improvement Centers, Generalists, Showrooms and Appliance Dealers, Trade Suppliers, and Wholesale Clubs.

A retailer's core customer profile can be understood without sales performance data by identifying the household segments present with high percentage representation across all of the retailer's store trade areas. This methodology identifies the segments that correlate with a retailers "average" store performance and allows for a consistent "core customer" profile that can be applied across any existing or future location for the retailer. Retailers are updated on a quarterly basis to capture new stores, closed stores and retailer who may have moved or changed their name. Each retail location in the transactional dataset was appended with a variable referred to as a Buxton Urban Density System (BUDS 2013), that describes urban density on a scale of 1-5. The intent of the score is to help describe the differences between highly rural areas and highly urban areas. BUDS is assigned at the block group level, the lowest level of the geographic hierarchy that the Census Bureau tabulates. Block groups are a subdivision of a census tract generally containing between 600 and 3,000 people with an optimum size of 1,500 people with a total of 208,632 distinct block groups nationwide. Using this variable provides insight into the difference in trade area sizing between stores of the same type between locations in dense urban areas compared to those in less dense and rural locations.

Trade area evaluation. Retail trade areas (the geographical draw of a particular product at a particular retailer) were derived from two different approaches. The first method, transactional analysis based on product transactions, is appropriate to employ when transactional sales data are available in enough volume to analyze. Over 450,000 purchase and installation transactions were captured for this analysis. This approach results in trade areas specific to products and their prices, but requires a large amount of product sales data to produce reliable results. The transactional data were run through a proprietary geographic data analysis tool that calculates and appends the drive time between each install site and retail address. The appended data were used to create product and retail-specific profiles. The shape of the drive time distribution is an accurate descriptor for trade areas because we know where the customers were shopping for specific products at specific retailers. The dataset was partitioned by urban density at the retail location, retailer type, and product to compare profiles to one another.

The second approach, proximity analysis, is used when specific transactional data are not available. This method considers the market where multiple locations for one retailer exist and the relationship between the locations' proximities within those markets. Proximity analysis is a widely used method in retail analytics to determine trade areas for retailers when no sales data are available.

Product categories. Where distributions showed similarities, products were combined to create overall categories. A definition of each category was derived from items that were combined for their similarity. The product categories currently analyzed by RSAT include:

- White Goods - This category is characterized by major appliances readily available in retail, with a useful life of typically five years or longer. These products are commonly purchased at retail, then delivered and installed by the retailer with simple installation.
- Over the Counter Retrofit - This category is characterized as having a mid-range price point, sold as an over-the-counter home improvement or retrofit products. These products

require some installation skill, such as hard-wired electrical products. These are typically products that the purchaser can take home with them and do not require separate delivery.

- Over the Counter Plug and Play - This category is characterized by typically low-cost, over-the-counter products that an average consumer could reasonably be expected to self-install and use, typically a screw-in or plug-in device.

Utilities. Utilities and the zip codes they serve are used to define utility service territories. To accurately represent all utilities, the zip code list was distributed for review and household counts (meters) by zip code were collected where available. Because service territories do not fall within zip code boundaries, more than one utility (electric/gas or electric/electric) may be serving customers within a single zip code. In these cases, the dataset designates which utility is the primary provider and which utility(s) are secondary and uses a weighting formula provided below. (The weighting formula factors W = utility weight for division of zip using U = # of utilities serving the zip, M = # of municipal utilities serving the zip, p = if utility is primary provider than 1 otherwise 0, m = if utility is a municipal than 1 otherwise 0). Under the current methodology, zip codes served by more than one provider are weighted between providers based on the formula, actual household counts and then geographic factors to perform the final allocation calculation.

$$W = \frac{(p+m+1)}{(U+M+1)}$$

Segmentation. The geographic information system (GIS) platform used for the analysis interacts with information from Experian's Mosaic® Consumer Segmentation system (Experian 2014). Experian's Mosaic® segmentation is a system that classifies all U.S. households and neighborhoods into 71 unique market segment groupings that share similar demographic and socioeconomic characteristics. In the development of this segmentation system, more than 600 variables were evaluated and considered to create the Mosaic classifications. Each variable was selected for its accuracy and ability to describe the U.S. population while at the same time identifying similar consumer behavior, expenditures and attitudes.

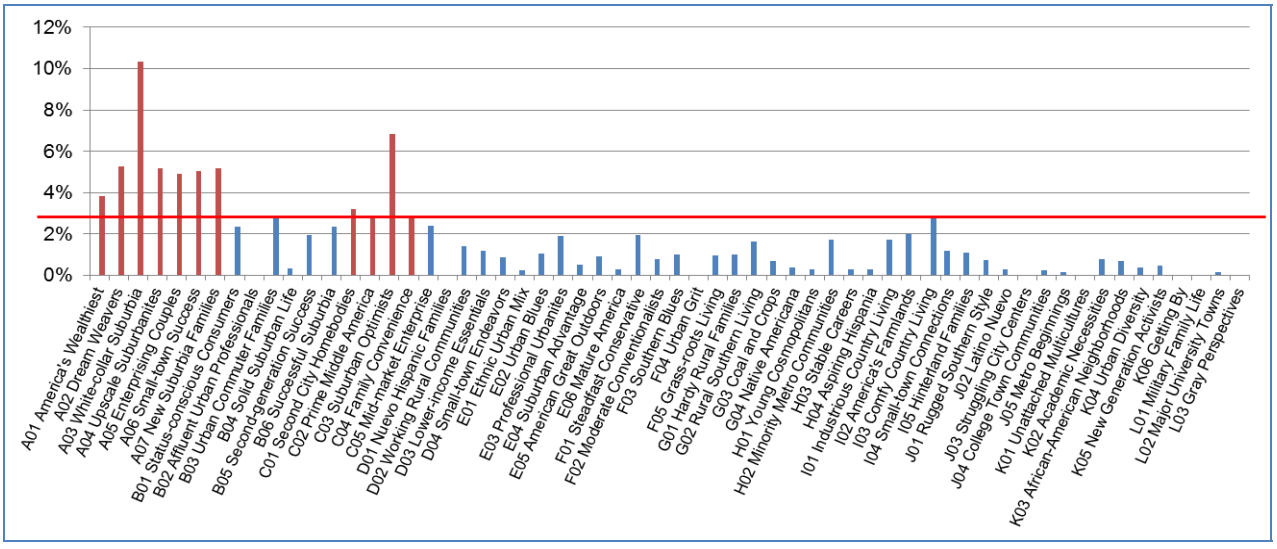

Figure 2. Mosaic unique consumer segments. *Source:* Experian 2014.

Mosaic segments within retail trade areas are used to create a profile specific to retail chains with locations in shared urban densities. For example, trade areas around Walmart in urban areas are used to create one profile, while trade areas for Walmarts in rural areas create a different profile. In addition, deeper understanding of local markets can be gained by looking at the attributes and characteristics of segments in a retailer's profile.

GreenAware profile. Because environmental issues associate closely to performance characteristics of products in energy efficiency programs, our research considered the GreenAware profile of households within trade areas (Experian 2014). According to the GreenAware segmentation system, each market segment receives a score of 0 – 200 for each of the four green aware categories (Behavioral Greens, Potential Greens, Think Greens and True Browns). The four categories are weighted based on the consumer's propensity to buy energy efficient products and those weightings like those shown in Figure 3 below, are used to help further refine sales allocations.

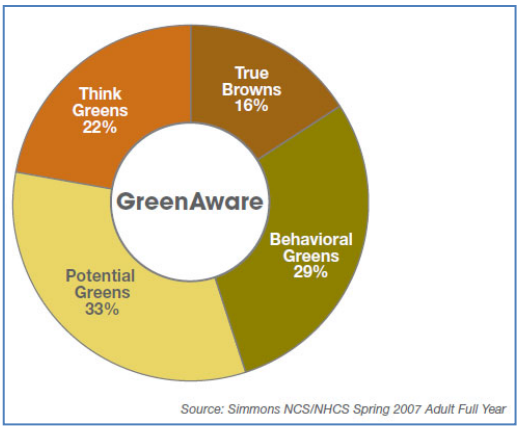

Figure 3. GreenAware categories.

How the RSAT Is Being Used Today

The tool is currently being used to develop allocations of energy efficient products for utilities where installation data is not available. Store sales data is provided to the utility as part of the participation agreement for participating and benefiting from upstream and midstream programs such as a LED buy down program. The allocations are used to determine the percentage of specific products that are being bought and installed within a utilities service territory. The allocations also are used when two or more utilities have contiguous borders with a retailer serving customers of all utilities, allowing for equitable division of the savings between sales for participating utilities. Another NW utility uses the tool to determine the number of products that are being installed within their territory to determine realization factors and making sure they are claiming resulting savings that will stand up to evaluation. It also allows them to choose the retailers that meet minimum allocation percentages set for retailer participation.

Methodology Supported By Independent Evaluation

In 2010 PacifiCorp published evaluation reports covering 2006-2008 (Cadmus 2010). In the three evaluated states, surveys of participating retailers and non-participants 20 miles outside PacifiCorp's service territory were used to determine leakage rates and net to gross factors. In Washington the leakage of CFLs to non-customers was found to be 13% and the net to gross factor was 100%. In Utah, where PacifiCorp has the majority of its customers, the CFL leakage for the same time period was found to be 1% and the net to gross factor ranged from 98% to 99% over the three year evaluation period. In Idaho the evaluation assumed reverse leakage was on par with the leakage of bulbs from PacifiCorp's service territory so leakage was assumed to be zero and the net to gross factor was 100%

PacifiCorp performed a second round of evaluations covering 2009-2010 publishing them in 2012 (Cadmus 2012). In Washington the leakage rate was found to be 24%, in Utah 9%, Idaho 20%, Wyoming 10% and California 1%. The second round of evaluations included good news and bad news. Nearly 85% of Utah is served by PacifiCorp so a low leakage rate is to be expected. PacifiCorp's service territory in Wyoming and California is geographically isolated so there is very little chance of leakage. In Washington and Idaho PacifiCorp's service territory is next to several other utilities with very active upstream programs. In response to the second round of evaluations PacifiCorp and PECI refined the RSAT methodology by increasing the screening to at least once every year to capture changes in retail allocations.

Other Uses

As partnering utilities put the RSAT into use some additional benefits have become evident including increased program accuracy, precision, as well as potential benefits for retailers.

Accuracy and transparency were certainly one of the most obvious benefits of the tool. The RSAT allows utilities to allocate sales and energy savings to each utility's specific service territory based on sales data, without requiring installation information or third party evaluation. Because of this, it can be a very effective resource for regional programs (e.g. BPA's Simple Steps, Smart Savings regional lighting and showerhead retail promotion) to allow a program to accurately distribute all program administrative costs and all program savings. Eliminating the need for installation data allows programs to move to mid- and up-stream models.

Leveraging the tool has also resulted in significant improvements to program design and precision. First and foremost, because the tool essentially eliminates breakage (unclaimed savings) and leakage (savings that is installed in a bordering utility service territory) a regional program can maximize all program-influenced savings. In cases of programs that are not regional in scope, the tool allows a utility to define which retail stores meet leakage thresholds and target those stores for participation. This allows for more sustainable DSM programs by proactively addressing leakage risk that might be defined in evaluation 2-3 years in the future.

The tool provides advantages that benefit busy retailers as well. The additional transparency of participating utilities helps a retailer more easily identify the number of store locations impacted, how much of a utility marketing budget might be leveraged. It can help a retailer plan in advanced to ensure adequate stock on hand of products to be promoted, or to make changes in their product portfolio to ensure greater success. This data can also facilitate

better targeting of both retailer and utility marketing dollars, tailoring them to products and messages with the most influence on purchasing decisions of consumer market segments with the highest purchasing potential.

Focusing marketing to a specific segment. While allocating costs and savings accurately was an initial use of the RSAT, the model also has potential to provide more value to the way that programs consider messaging for specific consumer market segments. Energy Trust of Oregon uses the tool to define consumer market segments in their service territory, then target those market segments with a higher potential for participation. For instance, they found that one of the largest Experian segments in the territory is the "Aging of Aquarius" segment (Experian 2014). This group of health-conscious, well-educated empty-nesters is ethically responsible and is likely to respond well to green messaging. The Program can find this group and identify other groups to target that might not align to green messaging but rather cost savings messaging, and map the neighborhoods where they live to create marketing campaigns or call to actions that appeal to their sensibilities. Figure 4 below presents a sample market segment ("Aging of Aquarius") and maps them within Energy Trust service territory.

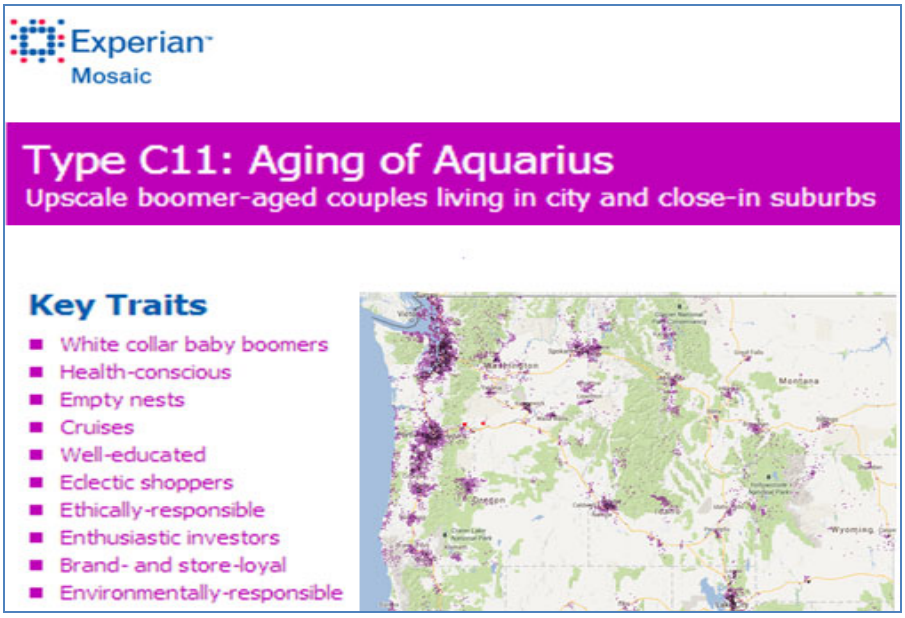

Figure 4. Aging of Aquarius market segment.

Targeting specific stores. Geospatial market segmentation data, paired with internal program data, provides the grounds for strong market analysis on consumers in the utility territory and the energy efficiency industry as a whole. For instance, by pairing address level participation data with census data, Energy Trust is able to determine that redemptions for certain measures is positively correlated with higher income, owner–occupied housing, and an age range of early thirties. The same tool that identifies these related factors, can identify the geographies that contain high concentrations of those consumers.

This approach to market analysis started in the fall of 2013, Energy Trust was able use a geo-spatial segmentation tool that identified the top market segments in the territory. Knowing the top market segments and the similarities among several of the top groups provided information about the target audience. This information helped guide the marketing message

campaigns for 2014 that resonated with the largest segment in the territory. Programs like refrigerator recycling programs have demonstrated higher success with the use of substantial marketing efforts. Tools like the RSAT can provide valuable information to make sure these marketing budgets are used most effectively. The Energy Trust program paired past participation data with information in the RSAT and was able to gain new insights on which customers participated in the program and tailor media buys accordingly.

This type of analysis is instrumental in identifying new opportunities and gaps in program coverage. By knowing which segments participate in programs and which are not, utilities could find ways to address the needs of customers that are being left behind, investigate barriers to participation for those groups, and reduce them. Additionally, programs can better understand the geographical reach in their territory and use the RSAT to identify more retail locations or other outreach solutions to fill those. Field services can also be allocated based on volumes of sales and locations.

In 2014, the Energy Trust will use this derivative data from RSAT to provide a market analysis that examines which market segments are more likely to participate in their New Homes and Products Programs (across lighting and appliance promotions, and many of the planned new initiatives). The RSAT can help identify the demographic factors of the top market segments. Using this, Energy Trust will be able to more effectively focus on priority areas that have a high concentration of the target segments and create new, innovative strategies for creating intervention points that are specific to those groups. They will be able to narrow the geographical focus for outreach events, promotions and media across all segments of the Program to allocate budget and tailor the messages to the crowd that will listen.

For the first few years PacifiCorp's upstream efforts only involved CFLs. In 2012 LEDs were added. In 2014 PacifiCorp is using RSAT to expand upstream incentives to light fixtures, room air conditioners, showerheads, aerators, thermostatic valves and advanced power strips. BPA will be expanding the number of retailers and product categories included in the RSAT to work to keep pace with regional utilities program development, possibly including new categories of contractor-installed measures like water heaters, windows and insulation purchased at a retail location.

Conclusion

Lessons Learned

Creating a resource to address the needs of 141 public and private utilities was no small task. Bringing a diverse group of utilities, both large and small, into the process early as stakeholders was critical. All participants were treated as partners in the development process and we worked to use every resource offered along the way, from feedback on stores to include (no matter how small) to utility zip code data, to utility in-house evaluation, as well as third-party evaluation of the tool (Cadmus 2014).

During the process we encountered several issues in the maintenance of the tool. Simply keeping the retailer data clean was a bigger challenge than we anticipated. Even though retailer data was gathered from reliable public resources, even purchased from verified third parties, the rate at which stores open, close or relocate is remarkable. We found that the basic data input of retailer name and address actually required significant vigilance. The third-party evaluation also

uncovered an issue of allocations changing over the course of two years, identifying that allocations would need to be updated more than once per year to maintain accuracy.

Of course, complexity of utilities' needs and preferences can't be overstated. The initial delivery construct of the RSAT was intentionally simple, providing utility allocations as percentages by store location and product in an Excel output file with macros. Feedback from about forty stakeholder participants (including both utilities and program implementers) was gathered on preference of formats between Excel with macros, slicers, or filters or as an Access file. Stakeholder preference leaned toward Excel with macros and filters and allocations will be provided in these two formats for 2014 to allow for a region-wide test of accessibility and application of the tool.

The development of the Retail Sales Allocation tool has been thorough. From its initial conception by PacifiCorp in 2006 as a tool to reduce program leakage, to BPA's region-wide expansion efforts (2011-2013), Energy Trust's advanced marketing utilization in 2013 and its use region-wide in the Pacific Northwest and beyond in 2014, the tool has come a long way. After conquering the initial need to address costs from program leakage, the tool quickly demonstrated how its "Big Data" roots could be mined for even greater opportunity.

Now that the RSAT has been released as a "final" version, Northwest utilities will have the opportunity to explore potential uses. We expect we will encounter issues and questions, particularly from utilities who were not closely involved with its development. However, at a time when utility programs are looking for better ways to work with retailers and manufacturers we believe this tool may provide a way for multiple programs to work together and manage information. Tools like the RSAT have the potential to serve as the foundation for strong regional retail programs. We can't ignore that many utilities already have a wealth of program information at their disposal to inform the development of their program and program marketing strategies. Still, without reservation, the Pacific Northwest is reaping benefits from the RSAT both from improved accuracy of savings, improved ease of collaboration, and the value of targeting programs to key market segments.

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