

Case Study

Colorado Springs Utilities



Facts:

Industry: Combination Utilities

Municipally-owned, four-service provider of electric, natural gas, water and wastewater services

Employees: 1,800

Approximately 440,000 customers and 700,000 meters

A community provider for more than 100 years



Background

Colorado Springs Utilities was searching for a solution/tool to conduct current forecasting, technical analysis, and stakeholder-driven preferences. As such, one area of focus was to increase demand-side management (energy-efficiency) programs by improving targeted marketing efforts to residential and commercial customers – generating market segmentation, identifying relevant marketing programs for each customer type, and increasing utilization of demand-side management budget.

Challenges

As a not-for-profit, Colorado Springs Utilities' marketing programs are geared to get customers to use less power in order to "shave the peak" or lower the peak demand. If they shave the peak, then they can avoid costs of building power and can pass the savings onto their customers. Some challenges to developing demand-side management programs include:

- › Internal systems working well in isolation, but not when integrating information (like work that's been done, programs that have been participated in, characteristics of customers).
- › They are a lean organization which made some of the traditional approaches of long development efforts and analysis into business process and sources impractical.
- › Defining customer segmentations of how to divide them up was complex and they would have to assume some things about their customers.

Solution

Tectonic analyzed Colorado Springs Utilities customers' electricity consumption against several segmentation variables -- dimensions/ measures of who would benefit from and participate in direct marketing programs. This was done by:

- › Ingesting and integrating 6 types of data sets, utilizing Google's Cloud Platform and Google's BigTable. Data sets included circuit service zones, service agreement types (commercial/residential), billing rate plan, demographics (county assessor, census/D&B data), weather (temperature), rebate programs and previous subscriptions by customers.
- › Analyzing and visualizing data, utilizing Tableau's data discovery tool for interactive exploration.

Proof of Value Outcome

- › Depending upon the source system, analyzed and visualized data ranging from the last 3 years to all historical data collected with approximately 1-15 tables in each data set.
- › Created and populated data structures, including the development of a statistical model for load profiles and customer segmentation.
- › Established the technology framework for an infrastructure capable of supporting the ingestion and integration of data and authenticated and secured the transmission of data from utility to cloud.
- › Developed a visualization dashboard that provided critical insight to the discovery of customer information in order to formulate a hypothesis for future predictive modeling projects.
- › Created a partnership between IT and business users as the proof of value revealed issues in Colorado Springs Utilities processes and data quality. Instead of focusing on the technology, they were focused on the affects of the data.

Proof of Value Platform Powered By:

