Case study

Learning from others and taking a different path

Silicon Valley Power (Santa Clara, California)

At a glance

- SVP is the not-for-profit municipal electric utility for Santa Clara, CA, serving over 52,000 residential and business customers.
- SVP monitored public opinion, educated its consumer base, and communicated with its customers to ensure the utility addressed customer concerns before implementing its AMI system, provided by Elster.
- SVP has a strong history of excellent customer service. With SVP MeterConnect, the utility continues to reach out to and protect its customers.

Opportunity

Silicon Valley Power (SVP) is the not-for-profit municipal electric utility for the City of Santa Clara serving the public interests of residents and businesses for over 100 years. SVP provides power to more than 52,000 residential and business customers, including Applied Materials, Intel, National Semiconductor, Microsoft and Yahoo!, with the lowest system average electric rate in California. SVP also offers customers a 100 percent renewable energy option through its Santa Clara Green Power program and is an active participant in the wholesale energy markets in the Western United States.

Given the high concentration of large business customers, SVP decided to focus on rolling out advanced meter technology to the business community first, followed by staged rollouts to residential customers over the next three years. The project is called SVP MeterConnect.

Elster is supplying the meters and the advanced metering infrastructure (AMI) to bring the environmental and economic benefits of the Smart Grid to businesses and residents of Santa Clara. Tropos Networks is providing the Utility Communication Infrastructure for backhaul transfer of the data collected and managed by the EnergyAxis® System. SVP will also provide its customers with free outdoor high-speed internet access via Tropos communication network.

Solution

Located in the heart of Silicon Valley, SVP has developed and implemented extensive plans for reaching out to customers and working to educate its consumer base with an aggressive customer communications strategy.

SVP has monitored public opinions by conducting surveys throughout this process to ensure that the utility is proactively addressing its customers' concerns and taking appropriate actions before something can be misrepresented or misunderstood. It is a natural tendency for utility staff to be dismissive of unusual or seemingly unfounded customer concerns; SVP takes a different approach by redoubling its communication effort to investigate and resolve every complaint and concern when possible.

After thoroughly evaluating seven respondents and interviewing two short-list candidates, SVP selected Elster as the right fit and a strong leader in advanced metering technology.

SVP serves the heart of the U.S. technology industry and needed an advanced Smart Grid solution to ensure accurate, reliable and secure meter reading and data management.

"Elster's proven track record of more than 4.5 million deployed EnergyAxis endpoints gave us the confidence that EnergyAxis will meet the rigorous standards of the SVP MeterConnect program. We selected Elster's EnergyAxis for its open IP standards and interoperable communications infrastructure; a technology that will help us best support the needs of our customers," said Larry Owens, SVP Manager of Customer Services.

Additionally, testing and validating accuracy and reliability at every step of the way are critically important to both Elster and SVP. To further set the solution apart, SVP clearly communicates with customers that it is utilizing a tried-and-true metering technology, a robust and flexible communication network technology and a deployment strategy that is thoughtful and respectful of customers.

Results

Silicon Valley Power has a strong history of excellent customer service. This claim can be substantiated by two independent[1] nation-wide surveys of SVP's large business customers in 2009 and 2010, where SVP was consistently ranked first or second in customer satisfaction and value.

Additionally, SVP actively engages market research professionals to test perceptions and satisfaction on an annual basis – residents in even numbered years and business in odd numbered years. SVP consistently ranks at the top or near the top in satisfaction metrics in these annual surveys of utilities across California.

To assure that it continues to provide the very best service to its customers, SVP is working in the following areas:

Taking advantage of the opportunity to expand services provided to customers and the community

This project includes the deployment of the Tropos Gridcom network into what SVP is calling its Utility Communication Infrastructure. The Gridcom network offers high-speed, high-data bandwidth, and high availability. The network functions as the backhaul for the AMI system; enables a wide range of utility applications including AMI, Demand Response, Distribution Automation, Power Quality Monitoring, and Mobile Workforce applications; as well as provides residents and visitors with expanded free outdoor Wi-Fi internet access. Not surprisingly, free public Wi-Fi was ranked as a top AMI benefit desired by a survey of customers.

Careful and methodical deployment plan

SVP plans to begin a careful, phased rollout of SVP MeterConnect, starting first in the business community. Testing will continue in 2011 prior to the initial rollout, and throughout the three-year installation period. In 2012, SVP will begin notifying residential customers of its plans to replace outdated mechanical electric meters with advanced AMI meters.

As-found testing of removed electromechanical meters

According to SVP's market research, customers are concerned about many things associated with "smart meters." Their biggest concern is that their bill will go up with the new meter.

"We share that concern because our experience tells us that digital metrology is more accurate than mechanical meters and mechanical meters typically run slower when they are failing," said Larry Owens. "We know that it only takes a handful of dissatisfied customers armed with 'proof' that bills go up with the new meters to create negative media storm."

To stay proactive on this issue, SVP will take and store "as-found" photos of the old meter set up and perform testing on 100 percent of removed electromechanical meters. This will establish a benchmark for proactive customer notifications regarding how their utility bill may be impacted by the installation of a new and accurate AMI meter.

1 Surveys conducted by E Source Business Account Management Service.

> The technology may be changing for measuring and displaying electricity use, but our commitment to reliable, low-cost service remains constant. Elster's proven technology is a good fit for our customer base and service requirements.
>
> JOHN ROUKEMA, DIRECTOR OF ELECTRIC UTILITY, SILICON VALLEY POWER

All residential advanced meters will include ZigBee HAN

SVP's research indicates that customers are most interested in a low-cost, no-cost in home display that allows them to see energy use like a speedometer in a car. SVP plans to evaluate demand response capabilities enabled by the ZigBee HAN and develop an appropriate suite of programs that would be beneficial to its customers.

Directly addressing security concern

SVP issued a press release on security when the concern was raised by its customers. SVP MeterConnect data security will be on a par with the encryption level of sensitive government agencies such as the U.S. Department of Defense. SVP Meter Connect also contracts with Milton Security Group to analyze and evaluate the privacy and security measures designed and installed in the SVP MeterConnect system.

SVP MeterConnect™ Promise

In addition to their comprehensive planning, SVP has established a strong commitment to reach out to and protect its customers.

The SVP MeterConnect™ Promise:

- We will upgrade our technology to support widespread adoption of solar energy, smart appliances and electric vehicles.
- We will follow a careful process and verify accuracy at every step.
- We will protect your data and your privacy.
- We will keep our system secure.
- We will utilize tried-and-true meters deployed successfully in millions of homes and businesses worldwide.
- We are committed to a fair resolution of any issues or concerns that arise.

The MeterConnect™ Promise assures consumers that SVP keeps their interests top of mind and becomes a guideline for every member of the implementation team. It is easy to see why Silicon Valley Power continues to earn excellent ratings for customer service year after year.

About the deployment

Ownership

Public

Installation

- Testing: 2010 and 2011
- Deployment: 2012 to 2015

Projected infrastructure

- Residential: 44,000 end points
- Commercial/industrial: 8,000 end points
- Project total: 52,000 meters

Key applications

- Outage and restoration management
- Billing and customer service

Status

In test

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WP42-6012A