



DTE Energy Co.

IntelliSOURCE™ is cornerstone of AMI strategy
that sees PHEVs on the horizon

The Challenge

Detroit Edison (DTE) has worked with Comverge for nearly 20 years. As one of the country's earliest implementers of demand side management functionality for residential customers, DTE Energy has used Comverge's PowerCamp Load Management System (LMS) since the early 1990s. Today, they boast about 280,000 participating residents in their CoolCurrents Air Conditioning Rate Program, and roughly 60,000 in its Interruptible Electric Water Heating Program.

Serving a region that was severely affected by the economic recession, DTE Energy wanted to help. By implementing advanced metering infrastructure (AMI) they could leverage dynamic pricing models to extend energy programs to their customer base to alleviate some of the economic pressures they are facing.

The utility built its smart grid infrastructure with funding from the U.S. Department of Energy. DTE Energy put in place the hardware and software needed to provide their customers with these services and submitted an application before the Michigan Public Service Commission for the new dynamic pricing model. The centerpiece of their build out was IntelliSOURCE.

"Everyone I've worked with at Comverge has definitely given us very good support. When they make a promise to deliver something to us, I trust they will definitely come through. They've gone above and beyond."

— Shaun Summerville, Smart Home Program Manager, DTE Energy

“With regard to a control system, we really haven’t looked at much beyond IntelliSOURCE to date, since we’ve had such great luck and such a good relationship with Comverge over the years using their LMS application.”

– Mark Switala, Manager of Business Applications, DTE Energy

The Solution

Comverge presented IntelliSOURCE onsite to DTE Energy, allowing them to perform home area networking (HAN) functionality testing on a laptop around the use of thermostats and control units. They then integrated it with Itron’s OpenWay® application, which they used for AMI purposes in a test environment.

“The functionality that IntelliSOURCE offers is the direction we’re looking to take moving forward,” said Mark Switala, DTE Energy’s Manager of Business Applications. “We like the flexibility of the product with regard to selecting whom to target for pricing signal or direct load control. That’s a function we don’t get through LMS right now – that degree of flexibility – because basically you can target down to a meter level.”

“And the functionality of a customer portal is very attractive. Right now, outside of a light on the control unit, there’s no way for a customer to tell if we’re in an interruption mode or not. With the portal that’s offered in conjunction with IntelliSOURCE, we can show customers pricing signals – actual prices for a time-of-use (TOU) rate – and if we’re in a direct load control situation.”

Shaun Summerville, DTE Energy’s Smart Home Program Manager, underscored this point and emphasized the bottom line: “We want to make

sure that we use the technology for the smart grid to provide new products and services to our customers to make them a partner by making them more aware of their energy usage. That’s really the ultimate goal.”

The Current Status

DTE Energy anticipates that, their SmartCurrentsSM program rollout will serve as a catalyst to demonstrate national leadership in smarter electric infrastructure development. It will also provide customers with improved electric service reliability, limited distribution of smart appliances through a partnership with Whirlpool, and new ways to control and reduce energy consumption and costs.

AMI will be the technological backbone of the SmartCurrents program, eliminating manual meter reading, adding outage detection, and remotely connecting and disconnecting functionality of smart meters. When used with IntelliSOURCE, it will enable customers to manage their bills and track their consumption. The program will incentivize end users to shift to off-peak usage through a new multi-tiered TOU program.

DTE Energy has big plans for IntelliSOURCE and AMI in the years to come. And, as one might expect from the utility serving the car capital, the talk is all about plug-in hybrid electric vehicles (PHEVs).

The Near Future

“We’re sitting on the hotbed of the activity,” offered Derek Kirchner, DTE Energy’s Analyst for Strategic Marketing. “We get a lot more opportunity to work on PHEVs than other utilities do.”

DTE Energy hosted a national PHEV conference at their Detroit headquarters in October 2009. Mark Switala explained: “We had Comverge onsite, and we used IntelliSOURCE to communicate through our AMI infrastructure to charging stations we located at our downtown complex. We sent pricing signals through our Itron AMI network – initiated by IntelliSOURCE – down to these PHEVs for charging. In one possible vision, PHEVs would look like another hand device within the home for the customer. The communication would take place through a ZigBee® wireless network within the home, and all signaling and pricing information and timing would be managed by IntelliSOURCE on the back end of our OpenWay infrastructure.”

Electric vehicles are on the horizon. Expect DTE Energy to be ready with IntelliSOURCE.

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