

# Commentary



**It's tough to describe the smart grid in words. It's made up of lots** of components, and many of them are quite technical. The benefits the smart grid offers are worth its hefty price tag, but making the business case is complex. A five-minute conversation or even a longer power-point presentation just can't do it justice.

CenterPoint Energy tackled the problem by building a technology center that puts all the parts of the smart grid together and shows how they work for the utility and the customer, from the substation to the customer's home. During a recent tour of the center, I watched the grid heal itself after "lightning" knocked the power out, saw how easily I could manage energy use in my home and how quickly the utility could connect or disconnect my account.

A picture, or better yet, a demonstration, is indeed worth a thousand words.

"To describe how the smart grid works and why it's important," said Don Cortez, division vice president, regulated operations technology, CenterPoint Energy, "takes a long time. Here, I can show people and make it come to life."



A transformer at CenterPoint Energy's technology center. The center is a showcase for smart grid technology. EL&P photo.



Part of CenterPoint Energy's technology center. Demonstrations at the center include a lightning storm outage scenario. EL&P photo.

CenterPoint is eager to move from the electro-mechanical era into the digital age and beyond, to what Cortez calls the "convergence" era. With smart grid technology, the utility could provide better system reliability and be more efficient, while consumers could better manage their energy consumption. CenterPoint operates in a deregulated environment where increasing competition is a good thing, and the company believes the smart grid will do just that because retail electric providers will be able to offer their customers new services. The technology center hosts tours for regulators, consumer advocates and other stakeholders, all important members of the community that CenterPoint has to work with to make the smart grid a reality.

CenterPoint's smart grid is a team effort. "The market will develop the technology," Don explained, "not the utility." CenterPoint uses Itron's OpenWay meter, a two-way device that does much more than measure kilowatt hours. The meter is a sensor that has a ZigBee element in it. IBM is an integral partner in CenterPoint's smart grid, working to develop an analytic engine for the raw data and energy-tracking interfaces for the consumer. In the technology center's "home" there are several thermostats from different companies, members of the ZigBee Alliance.

Consumers, as we all know, like to have choices. Broadband over power lines, the backbone of this smart grid, is what makes all the high capacity communication possible.

Across the street from the technology center, wooden poles and wires carry electricity to Houston's homes and businesses just as they always have. Change will take years, said Don, but someday everything from the substation to the home will be automated. How far down the smart grid road is your utility? Maybe you could use a technology center like CenterPoint's. Go down to Houston and take the tour. (Contact me; I'll put you in touch with Don.) You'll get some great ideas. And just think of all the hours of talking you could save yourself.

**Nancy Spring, managing editor**