

Manufacturers now are focusing far more on supplying the smart grid, in part because the market is much more lucrative. Sensors and devices will be an \$85.5 billion market by 2014, according to a Zpryme Research & Consulting LLC report. To capitalize on this shift, many smart-grid manufacturers are gearing up by adding people and ramping up their product development. While working on building the demand side is still important, supply presents increased opportunities for manufacturers.

### Where We Are Now

To properly assess the smart-grid market, both the demand and supply side must be evaluated. The demand portion includes how to control energy inside the consumer space: smart meters on buildings, smart thermostats and smart appliances, to name a few. Included in the supply side lie the utilities, which have to spend money to upgrade their transformers, transmitters and plants to receive the information from the consumer and change their distribution according to real-time feedback. Together, the consumer and utility stakeholders, working in concert through sophisticated two-way communications, comprise the smart grid.

Chet Geschickter, smart-grid senior analyst for GTM Research, says the first thing people need to understand about the development of the smart grid is where the United States is now.

"We're a far cry from the digital, two-way communications systems that will be necessary to have a truly smart grid," he adds. "That's one of the reasons it will take a while for us to get there."

The hype is still outpacing the reality, even for those who are trying to build smart-grid components. Mike Zimmerman, founder of Building IQ, a Sydney, Australia-based manufacturer of software that helps commercial buildings communicate with the grid, says the United States has a long way to go before it can truly say it has a smart grid.

"Right now, we have a dumb grid," Zimmerman says. "We



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need to build a not-so-dumb grid, and then maybe in 10 years, we'll have an average intelligence grid. Then 10 years after that, it will really be the smart grid."

The investments necessary to make the jump Zimmerman talks about are many. First, utility companies have to equip their infrastructure with sensors and devices capable of gathering the information being collected by the consumer-side meters and appliances. There also needs to be a boost on the consumer end of installing devices that give that information to the utilities.

Second, the utilities will need to install software at the plants themselves that can process the information into useful, actionable information so the companies can make intelligent decisions about how they need to deliver electricity and to whom. Up to now, that infrastructure has been largely ignored by manufacturers, so there's a lot of catching up to do.

### Internal Expansion

In the initial stages of smart-grid development, companies, governments and consumers have focused on changing attitudes on the demand side, Geschickter says. The focus is on building the infrastructure that will be capable of the two-way communication so critical to making the smart grid work.

"There are the first-line meters, submeters—all of those

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**The shift in focus for the smart-grid technology is from the demand side to the production side. More sensors and devices will provide operators on the utility side with more information to make smart decisions on load capacity and electricity delivery.**

