VISION | STRATEGY | **REALITY**

A community effort

+ XCEL ENERGY INVOLVES NUMEROUS STAKEHOLDERS TO MOVE FROM VISION TO REALITY

AS ROGER GRAY POINTED OUT IN THE LAST ARTICLE, TODAY, MANY UTILITIES struggle to figure out where smart grid/intelligent utility fits in their company—from what department owns these projects to how departments collaborate on a project. Michael Lamb, managing director of IT operations and strategy, Xcel Energy, discusses how building grid intelligence takes more than just a department or a utility, but an entire community.

COMMUNICATING THE VISION

Developing and winning support for Xcel Energy's smart grid vision involved numerous parties. Executives—in particular Mike Carlson, chief information officer (CIO), and Ray Gogel, chief administrative officer (CAO)—were instrumental in developing the vision. Xcel Energy then reached out both across and outside the utility to win support for the vision. The outreach included meetings with Xcel Energy personnel in areas including operations, marketing and customer care. Xcel Energy presented the vision not only internally, but also with a number of other large companies—including Accenture, IBM, Siemens and Motorola. Xcel Energy also engaged regulators and legislators.

"We needed to help everyone get their mind around smart grid," said Lamb. "People may understand the theory and vision, but what does it mean in reality? Smart meters are nothing new. Distribution automation is nothing new. What's new is that we are connecting all of the technologies. We wanted to expand intelligence from the fuel source all the way to the end user. Fundamentally, the need to know what the energy is doing, for example, from wind to light, resonated greatly with the audiences."

MOVING FROM VISION TO REALITY

After communicating the vision, it then came time for Xcel Energy to make the vision a reality. Lamb said: "We took criticism about our vision seriously and understood that we had to demonstrate and take on meaningful projects." Currently under way, Phase I of this demonstration includes seven quick-hit projects:

❚ Wind power storage
❚ Neural networks
❚ Smart substation
❚ Smart distribution assets
❚ Smart outage management
❚ Plug-in hybrid electric vehicles
❚ Consumer web portal

Phase I focuses on technologies that support Xcel Energy's smart grid

vision. Phase II, labeled SmartGridCity, addresses the integration between these technologies. In order to ensure that these demonstration efforts support Xcel Energy's original vision, numerous groups are involved in these efforts. Each quick-hit project has an executive sponsor and a team of managers. Groups involved with SmartGridCity cut across at least 10 different parts of the company. Personnel from groups such as operations meet on a regular basis to discuss the project and its progress.

Even though a great deal of attention has shifted toward SmartGridCity, Xcel Energy constantly evaluates both SmartGridCity and its quick-hit projects against the hard and soft benefits it expects to achieve from the projects. "You have to be diligent to check the deliverables and against the vision constantly," Lamb said. At the same time, Lamb has realized that Xcel Energy's efforts often result in more questions than answers. "I don't anticipate that the overall vision will change, but the tactics of realizing that vision may change as we move forward," Lamb said.

As far as advice for other utilities, Lamb said that each utility needs to establish what a smarter grid means to them and ultimately gain CEO support. "You can't underestimate the effort needed to change the company culture to accept these technologies," he said, adding that utilities by nature attract risk-conscious individuals, but developing a smarter grid and a more intelligent utility will require transformational change. To help people understand what these changes mean for a utility, Lamb suggested that utilities need to "show action, don't just talk about it."

◄ **Wind turbines at the National Renewable Energy Laboratory Wind Farm near Boulder, Colo.** *(AP Photo/ Jack Dempsey)*