



# Competing for the New Workforce (Part 2): How do Utilities Need to Change

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Meet the Author:

An IEEE Fellow, electricity industry visionary, and leader, Dr. Mani Vadari delivers strategic services to a global set of utilities, vendors, and service providers seeking deep subject matter expertise in setting the business and technical direction to develop the next-generation electric/energy system. As a Business Architect, Dr. Vadari has been delivering solutions focusing on Transmission/ Distribution/ generation operations, Energy markets, and Smart Grid for over 35 years. In addition, he is an Adjunct Professor at Washington State University and an Affiliate Professor at the University of Washington. He has published two popular books, "[Smart Grid Redefined: Transformation of the Electric Utility](#)" and "[Electric System Operations – Evolving to the Modern Grid, 2nd Edition](#)", in addition to over a hundred industry papers, articles, and blogs. His books are serving as textbooks at several universities in the US and around the world

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**With so many Baby Boomers headed for the exits to retire in the next five years—some 40 percent of the utility workforce by most accounts—the twin challenges of doing more with less and doing it with fresh recruits looms on the horizon.**


**The answer to these challenges seems to involve tapping technology to do more with less, and using tech savvy workers to make it happen. Yet integrating those two answers into a traditional utility environment still functioning with the traditional regulatory compact is something of a challenge in itself.**

## The Strategic Worker:

As the utility workforce evolves; workers will need to shed the blinders that keep them focused on individual tasks embedded inside of business or operational unit silos. Instead, they will need to understand how the entire industry is changing around them and how those changes impact their roles and responsibilities. They will need to be more strategic in their approach. Areas impacted include but are not limited to:

- **Meter transformation:** The change from electro-mechanical to smart meters is changing the role of the customer service representative. What was once simply a role dealing with a customer's bill payment is transforming into one that requires answering user questions on energy efficiency and management. Smart meters even allow reps to become proactive about customer outage notifications, and provide more accurate Estimated Time of Restoration (ETOR) information.
- **Automation Expansion:** The advent of distribution automation, new approaches to distribution management, and technologies such as synchrophasors allow both transmission and distribution operators to move from traditionally reactive to more proactive behaviors to optimize utility operations and more effectively utilize their assets.
- **Customer service:** In the new workforce, all jobs may include an element of customer service—pushing employees to become their utility's brand ambassadors. As management and operations employees move from tactical to strategic responsibilities, their increasingly direct interaction with customers will impact the bottom line. Reputational effects of this type are already clear from catastrophic events such as 2011's Nor'easter and 2012 Hurricane Sandy.

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## Training the new workforce

Most utilities have already come to develop key performance indicators (KPIs) by which to measure the integrated performance of its business units. For this to be successful, the new workforce will operate under a set of knowledge, skills, and abilities (KSAs) that allow them to adapt to new business processes. They will use new technologies like mobile computing to access data from a variety of sources—some human, some technological—and make decisions that have far-reaching consequences due to the integrated nature of the processes they now touch.

KSAs	Key Objectives	Sample questions that need to be answered
Knowledge	What am I doing and Why am I doing it and how do I do it?	<ul style="list-style-type: none"> <li>• Understand the regulatory compact in the state and locality</li> <li>• Company strategy – what is important to the utility?</li> <li>• What is my job and what is expected of me and how am I judged?</li> <li>• How is my activity making someone else’s job easier or more effective?</li> </ul>
Skill	Do I have the rights levels of expertise and proficiency	<ul style="list-style-type: none"> <li>• Computer skills</li> <li>• Interpersonal skills</li> <li>• Customer services skills</li> </ul>
Abilities	Do I know how to use the right tools and techniques to do the job	<ul style="list-style-type: none"> <li>• Specific tool training</li> <li>• Specific business process training</li> <li>• Understand and be proficient in the detailed procedures necessary to perform the job</li> <li>• Who has the information that will allow me to do my job better?</li> </ul>

### **A good training program will drive workers through a careful analysis of the KSAs including but not necessarily limited to:**

- Awareness of how one’s job supports the utility’s broader business, and of technical awareness of industry issues and trends
- Knowledge of detailed business processes and procedures for workers to do their jobs, along with the associated KPIs.
- Specific training on tools is required to perform tasks more completely and effectively.

**As this industry evolves, it must anticipate new dimensions such as the growth of micro grids, distributed renewables, and an influx of new participants that support retail markets all leading to possible disruptions to the traditional utility’s business model. The growing tide of workers retiring in the next three to five years will quickly reach “crisis level” within organizations unless we react proactively—and soon.**