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Human Resources

Documenting Institutional Knowledge

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The imminent retirement of a large proportion of highly experienced employees is a growing problem for utilities. The work force is aging, expertise is disappearing and human resources professionals find it increasingly difficult to recruit and retain qualified replacements. More important, utilities are losing undocumented knowledge.

“The loss or departure of undocumented knowledge associated with this situation can be particularly problematic with complex systems that have been in place for many years,” said Madeleine Gross, Lewis Hanes and Thomas Ayres, in 2002 paper, *Capturing Undocumented Worker- Job-Knowledge at Electric Utilities: The EPRI Strategic Project*. “Younger, incoming staff are unlikely to have had education, training, or experience that is directly applicable to older technical systems.”

Older, experienced employees play an important role in transferring knowledge and skills to younger staff. Some organizations rehire retirees on a part-time or temporary basis to facilitate knowledge transfer between older and younger workers, but few ask veteran employees to mentor younger ones as part of their jobs, even though such programs can facilitate the transfer of organizational values, experience and knowledge.

The aging work force is a “major problem in sectors such as the federal government, aerospace and defense, manufacturing, health care, education and the energy sector, which includes oil and utility companies,” said David DeLong, in an article published in *Veritude*, an online human resources newsletter. This is further supported by an American Public Power Association survey report on the public power work force, *Work Force Planning for Public Power Utilities: Ensuring Resources to Meet Projected Needs*. Half of the respondents to the 2005 survey said 20 percent or more of their employees will be eligible for retirement in the next five years.

Industries that have been around for many years and that are places where people have spent much of their careers are particularly at risk because they stand to lose so many workers at once. The soon-to-retire people have extensive knowledge about complex technical systems and integrated work processes. Because of the explosion of information technology in the last 25 years, organizations have come to rely on new types of complex knowledge that did not exist a generation ago.

The Tennessee Valley Authority, with a work force of 13,000, faces the potential exodus of up to 40 percent of its workers over the next few years. Eighty-five percent of TVA’s non-management employees work in fields requiring technical training. The federal utility has developed a process to capture undocumented knowledge of employees who are retiring soon. The process allows managers to identify critical at-risk knowledge and to evaluate the risk associated with the loss of

that knowledge. It also allows managers to develop and implement actions to document, mentor, train and share expertise.

There are key strategies a utility can employ to capture undocumented knowledge:

Identify employees with valuable knowledge. First survey employees and ask them when they plan to retire. It is important, whenever possible, to identify the specific individuals who are likely to leave (and when) for both executives and other key talent.

Determine if employees are willing to provide knowledge. Once experts are identified, it is important to determine whether these employees are willing to share their knowledge with others. Many will be, as they will feel honored to be recognized as an expert. Some may feel an obligation to share their knowledge because of their relationship with the utility or simply because they see it as the right thing to do. Others may participate because they are given time to do so.

Some employees may not be willing to share their knowledge. They may view their knowledge as intellectual property, and may want to use it for consulting work after retiring. Others may view it as job protection and take the view that sharing knowledge with others could make them vulnerable to premature termination. Others may feel they do not have time to share information due to current work assignments.

Determine what valuable knowledge employees may have. This is a critical step because it spells out the specialized knowledge or skill each employee has. It also helps to determine the consequences of losing each area of knowledge or skills, and to assess which ones are most critical to the utility.

When capturing the undocumented knowledge of its employees, TVA asked the following questions:

- What is the relative importance of this knowledge?
- What is the relative immediacy of knowledge loss?
- What is the cost and feasibility of recovering this knowledge, if lost?
- How difficult is it to transfer this knowledge?

Develop a plan to elicit and store valuable knowledge. The plan should consider factors, such as the type of knowledge, availability of the retiring employee, and capabilities of the personnel responsible for eliciting the knowledge.

Once the plan is implemented, the captured knowledge should be formatted and properly stored so it can be retrieved and used by others.

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