



# Sloan Career Cornerstone Center

## Profiles of Electrical Engineers and Computer Scientists



**John Ackerman**

**Chairman of the Board  
Public Service Company of New Mexico  
Albuquerque, NM**

### **Education:**

B.S. - Electrical Engineering, University of New Mexico  
M.S. - Utility Management, New Mexico State University

### **Job Description:**

Chairman of the Board

### **Advice to Students:**

"I would say pick up at least three classes: speech, advanced writing or technical writing, and ethics."

### **Video Transcript:**

"I would say pick up at least three classes in addition. One would be in speech so you can learn to communicate to people verbally, one would be in advanced writing or technical writing so that one could learn how to communicate in the written form, the information and the knowledge and the wisdom one has and third, the area would be in ethics. I suggest ethics because one of the things that causes some engineers difficulty is that they look at engineering as a black and white world. If the formula fits, you do the calculations, you get the numerical answer, you're done! But that's not how it works in reality. In reality we have to go beyond the technical and legal requirements of a problem and look at the ethical considerations and that's a very gray area and that calls for knowing oneself very well and what makes you think the way you do, what makes you believe the way you do and helps you to make judgments which are different than just coming up with answers."

### **Interview:**

John Ackerman is Chairman of the Board at Public Service of New Mexico. He directs the voting on major decisions, projects, and benefit packages. "One of the things that causes some engineers difficulty is that they look at engineering as a black and white world ... But that's not the way it works in reality."

John Ackerman works for Public Service of New Mexico because he "wanted to be in an industry that did something good for somebody else, and I looked at the electric utility industry

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and I thought everybody needs energy. Hospitals need energy for our healthcare; people at home need it for their comfort. Nowadays, we need it for our computer systems, our PCs, whether they're at home or at our desk at work. This is an area where you can help a lot of people in the kind of work you do." And helping people is not always easy.

When hiring, Ackerman looks for three types of skills in a candidate. First, "the analytical, problem-solving skills ... Secondly, I look for communication skills. Having a lot of knowledge doesn't do much good if you are unable to communicate with people. And third, I look for their ability to make judgments." His academic recommendations to students are directly related to these abilities. Besides their engineering courses, he advises them to take speech and either advanced writing or technical writing so that they learn to communicate effectively. Third, Ackerman urges students to take a course in ethics.

I suggest ethics because one of the things that causes some engineers difficulty is that they look at engineering as a black and white world ... But that's not the way it works in reality. In reality, we have to go beyond the technical and legal requirements of a problem and look at the ethical consideration and that's a very gray area. In delivering power to a community, for example, Ackerman points out a number of non-technical considerations: Is it sightly? Would there be emissions? Would it affect water quality? What are the economics of different options?

Although all of the major professional organizations have codes of ethics, Ackerman does not believe they solve individual problems for individual engineers. "The problem with those codes is ... (that) they are guidelines and they don't present the rule or the way to handle every situation that one is going to encounter ... As individual engineers, we have to make judgments all the time, and the foundation for those judgments is more than just the technical considerations of our job."

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