Got Engineers?

Concerned with the reports about the aging power industry workforce and wondering how you will manage if nearly half of the power engineers in the U.S. retire within the next five years? And bringing the remaining young engineers up to speed on things like renewable energy, smart grids, and all the upgrades needed in distribution and transmission networks to handle the increased energy needs? It sounds like a daunting task, but there are steps being taken to prepare.

It all begins with improving power engineering educational opportunities. Many organizations have gained ground on this already including the IEEE Power & Energy Society (PES), which has been working since 2007 on an initiative called the Power and Energy Engineering Workforce Collaborative (PWC). The PWC is a partnership of industry, government and universities working together to address electric power industry workforce challenges and increase the number of students studying power engineering.

“Establishment of the PWC came about partially in response to a 2003 survey of 40 U.S. and 27 non-U.S. academic institutions. The study showed U.S. universities were struggling to replace retiring power engineering faculty, and it predicted that a lack of power engineering professors will lead to fewer programs and hence fewer students pursuing degrees in the field, making the shortage even worse.”[1]

Training power engineers is nothing new for Siemens PTI; our consulting engineers have been in the business of teaching students for more than 40 years and have recently added new courses such as “Distribution Automation and Analysis for the Smart Grid” and our Energy Professional Series discussed in further detail in this issue.

We've recently made our transmission planning tool PSS®E available for free to university students and professors, with over 450 copies downloaded to date. This will ensure that these entry level power engineers will be productive from the start and can concentrate on creative ways to face the challenges of the industry rather than starting at the bottom of the learning curve.

Siemens Energy, Inc. has formed a partnership with University of Pittsburgh’s Swanson School of Engineering, to support the education of highly qualified engineers at the university level. This includes establishing an annual graduate fellowship in power and energy engineering, supplying the full professional version of PSS®E for student use, and granting access for both faculty and graduate students to attend PTI courses.

Gregory Reed, director of the Swanson School’s Power and Energy Initiative and a professor of electrical and computer engineering, said “We will be educating our students with the direct support of the world’s leader in power-system analysis and give them a unique opportunity to work with the tools they will use in their careers.” “PSS®E is the tool utility companies use for daily operations and long-term planning, from maintaining their networks to implementing new technology. Wherever our students go in the power and energy field, whether they were undergraduates who were introduced to the software or graduate students who conducted research with it, their experience with PSS®E will set them apart.”

These are just some of the initiatives that are being undertaken to strengthen the workforce to meet the challenges ahead. We hope that you will continue to look to Siemens PTI as your partner in education.