

Meeting the Electricity Industry Human Resource Needs: The Universities' Role

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Abstract — This is a summary of the presentation on the panel titled “Issues and Challenges in Power Engineering Careers at the 2005 IEEE/PES GM in San Francisco, CA.

Index Terms — Continuing Education, Power Engineering Careers, Sourcing

PANEL SUMMARY

THE rapid and major changes underway in the electricity industry have brought about significant repercussions on the human resource needs of the industry. The huge reductions in force throughout the industry have significantly reduced the depth of technical expertise and the breadth of experience at many industry enterprises. The attendant decrease in recruitment and hiring have further eroded the knowledge base in the industry. When these changes are coupled with the large number of recent retirements and the even larger number of planned retirements, the industry is facing a big demand for the steadily decreasing number of power engineering graduates. This presentation addresses the role that the universities can play in successfully meeting the ramped up human resource needs of the electricity industry.

The discussion starts out with an assessment of the needs of the industry in terms of forecasted manpower requirements. The current status and key trends in undergraduate and graduate power engineering programs are surveyed and a careful evaluation of the recent statistics on the subject of enrolment and delivery of EE degrees. In general, at the undergraduate level, the wide interest in newer fields, such as nanoelectronics and computers, has steadily eroded interest in power engineering. At the graduate level, a somewhat steady en-

rolment level has been maintained with the large influx of foreign graduate students. The state of the university – industry relations is assessed and the government involvement in power engineering education and research is discussed.

Given the magnitude and the scope of the human resource needs that need to be addressed, success in meeting this unprecedented high demand will require a solid industry-university-government partnership. The partnership requires the establishment of a solid foundation given the scope and magnitude of the efforts required to effectively solve the human resource problem on a timely basis. The universities' role is critical in shaping and providing the training of the cadre of future power engineers and specialists that the industry needs. The partnership will be a key thrust in facilitating the universities' role in this matter. The active role of the government in the direct support of power engineering education and an increased involvement of industry in all aspects of the educational experience of students and faculty are crucially important factors. Major thrusts of the scope and nature of efforts will be outlined.

BIOGRAPHY



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