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Workshop Focus & Objectives

December 13-16, 2009
TAM-UQ - Doha
NSF Workshop: Sponsoring Institutions:

- National Science Foundation
- Qatar National Research Fund
- Texas A&M University at Qatar  
  *(Prasad Enjeti, Shehab Ahmed)*
- University of Minnesota  
  *(Ned Mohan)*
- University of Central Florida  
  *(Issa Batarseh)*
NSF Workshop: Electrical Energy Education & Research

Workshop Focus:

Discuss electrical energy education from an international perspective. Bringing together related expertise from the US and the Middle East to discuss energy education and explore possible research collaboration.
NSF Workshop: Electrical Energy Education & Research

Workshop objectives:

• What is being offered in the electrical energy field. In terms of effective classroom and laboratory instructions.
• Focus on detailed course offerings, at both the undergraduate and graduate levels and the use of technology in teaching.
• Explore the current industry needs for power conversion and power system engineers.
• Provide the opportunity to establish research collaboration between the US, Qatar and the region.
In the next three days, the workshop will include:

**Opening Session**

**Sessions:**
*Session I:* Recent Energy Education and Research Activities:
*Session II:* US - Modern Curriculum in Electrical Energy Systems
*Session III:* Middle East - Modern Curriculum in Electrical Energy Systems
*Session IV:* Technology Based Course Delivery in Energy Systems:

**Panel Discussion:**
Summary of Workshop and defining a minimum common curriculum

**Desert Safari**
Opening Session:

* The Role of Qatar National Research Fund in Energy Research
  * Abdul Sattar Al-Taie, Director Qatar National Research Fund

* Energy Research & Qatar Science and Technology Park
  * Dr. Tidu Maini, Science and Technology Advisor to Her Highness Sheikha Mozah
  * Executive Chairman of Qatar Science and Technology Park

* Importance of Electrical Power Conversion Education
  * D.M. Divan, IEEE Power Electronics Society, President

* NSF Perspective
  * Osman A. Shinaishin, Senior Program Manager
  * Office of International Science and Engineering
Monday, December 14, 2009

Session I: Recent Energy Education and Research Activities:
Five papers to discuss the recent trends in renewable energy research and education (Egypt, Qatar, US)

Session II: US - Modern Curriculum in Electrical Energy Systems:
- Modern Power Electronics Courses at UCF
- The UMN Experience in Educational Delivery
- University of Illinois – Energy Curriculum
- Teaching and Research of Power in the era of Clean Energy and Green Industrialization
- Texas A&M College Station & Doha - Energy curriculum
- Smart Grid Based Energy and Research at RPI
- Integration of Renewable and Green Energy in Electric Power System Education and Research
Tuesday, December 15, 2009

Session III: Middle East and Other - Modern Curriculum in Electrical Energy Systems:

- Qatar University – Electrical Energy Education
- University of Jordan Energy Curriculum
- Alexandria University – Power and Controls Curriculum
- Teaching and Research at Munich University of Technology
- Energy Education at Taibah University
- Energy Education at the University of South Valley
- Energy Education at the American University of Beirut
- Energy Curriculum - Cologne University of Applied Sciences
- Energy Education at ITU
- Project Based Renewable Energy Education - The Petroleum Institute
- Energy Education at Sharif University of Technology
Tuesday, December 15, 2009

**Session IV: Technology Based Course Delivery in Energy Systems:**

- Teaching with Technology - *Texas A&M University at Qatar*
- Distance Education Modules – in Power Electronics & Power Systems
- Fully On-line Teaching and Assessments of an Undergraduate Power Electronics Course

**Panel Discussion: Summary of Workshop and defining a minimum common curriculum**

*Panelists: Divan, Abu Futouh, R. Kennel, T. Sebastian, Ned Mohan*
Wednesday, December 16, 2009

US Hybrid Vehicles and the Future of the Automotive Industry

Ahmed El Antably, Consultant - General Motors Corporation (Retired)

Desert Safari - Afternoon
THANK YOU FOR YOUR PARTICIPATION