

Minutes of the IEEE - Power and Energy Society

**Power Engineering Education Committee –Main Meeting**

Tuesday, July 22, 2008  
Pittsburgh, PA

The PEEC Main Meeting convened at 2:00 pm in Cambria West Room of the Westin Hotel in Pittsburgh, PA at the 2008 PES General Meeting.

**Members and Guests present:** Sukumar Brahma, Karen Butler-Purry, Badrul Chowdhury, Mariesa Crow, M. E. El-Hawary, A. A. El-Keib, Alex Flueck, Adly Girgis, G. T. Heydt, Benjamin Jeyasurya, Brian Johnson, Chen-Ching Liu, Elham Makram, Joydeep Mitra, Karen Miu, Dagmar Niebur, Anil Pahwa, R. Ramakumar, Bill Rosehart, Peter w. Sauer, Noel N. Schulz, Jeff Selman, Sidhharth Suryanarayanan, S. S. Venkata, Vijay Vittal, Zuyi Li, Ned Mohan, M. A. Rahman, N. D. R. Sarma, P. K. Sen, Anurag Srivastava, Osama Mohammed, Hamid Zareipour, Joe Chow, Jason Stamp, Gregory Reed, Sukumar Kamalasadana, R. Barnett Adler, Ali Abur, Dennis Ray, Barbara Kenny, Wanda Reder, Prabha Kundur, Adel Nasiri, Xiao-Ping Zhang

**Introductions:**

Attendees introduced themselves.

**Announcements:**

- Crow mentioned that we have a number of panel sessions. Since the society has started trying to focus on super sessions, they have put all the super sessions on Monday afternoons and Tuesdays and so they have asked the committees to try and schedule their other panel sessions away from those. That is why our panel sessions have been placed at the end of the meeting. So nothing personal if you find yourself scheduled for Thursday morning. We have a concurrent panel session going on right now, which is The Role of Laboratory Education and is chaired by George Karady. Tomorrow morning we have two concurrent sessions: one is Publish or Parish: An Evaluation of Quality, Quantity, and Ethics in the Review Process being coordinated by Paulo Ribeiro and the second one is Pre-College Initiatives in Power Engineering Education being coordinated by Alex Flueck. Tomorrow afternoon we have Infrastructure for Enabling Sustainable Energy Technologies coordinated by Jerry Heydt. And also tomorrow afternoon we have Education of the Power Engineers of the Future chaired by Bill Rosehart and Hamid Zareipour. On Thursday morning we have Experiences and Research in Education chaired by Dagmar Niebur.
- Crow recognized the award winners, which included Ned Mohan for the Outstanding Power Engineering Educator Award, Bill Rosehart for the Walter Fee Outstanding Young Engineer Award. Also recognized was Karen Miu for the Walter Fee Outstanding Young Engineer Award for 2007. In addition, Charles Gross, Teddy Putgen, Alfredo Testa were recognized for becoming Fellows of IEEE. She also mentioned that some other educators have become fellows but they are not members of PEEC. Crow congratulated Jim

Kirtley for becoming member of National Academy of Engineering in 2007 and Thomas Lipo for becoming member in 2008.

**Approval of minutes:**

Crow presented minutes of the 2007 GM and 2007 NAPS for approval with minor wording change suggested by Niebur. Crow asked members additional corrections or amendments. Girgis moved to approve the minutes and Heydt seconded the motion. The minutes were approved by a voice vote.

**TCPC Report: Karen Butler-Purry**

From June 1<sup>st</sup> 2007 to July 21<sup>st</sup> 2008, 15 papers were submitted, two accepted, four rejected, three advised, and six under review. It has been very difficult to get reviewers to respond. We usually have 15 or 16 papers in a year and if everybody would commit to reviewing one paper a year, this job would become easier.

**Subcommittee Reports:**

**Awards: Abur**

Abur presented the Distinguished Service Award to Vittal. He followed this by presentation of the prize paper award to X. Yang, S. P. Carullo, K. Miu and C. O. Nwankpa for their paper "Reconfigurable Distribution Automation and Control Laboratory: Multiphase, Radial Power Flow Experiment, IEEE Transactions on Power Systems, Volume 20, Aug. 2005 Page(s):1207 – 1214."

**Life Long Learning: Brahma**

At T&D Conference we had two four-hour tutorials and two eight-hour tutorials. They were very well attended with a total of 279 registrants. In addition, the education track had 893 registrants. We have rectified the tutorial surplus distribution process to avoid delays that we have experienced in the past. We have already distributed surpluses of T&D. For this general meeting we have eight tutorials and all extremely well attended. There is just one that is a four-hour tutorial and all others are eight-hour tutorials. The biggest in terms of attendance is the tutorials on the wind generation modeling and controls. First we had a deadline of 50, which we had to revise to 75, and now we have almost 90 registrants. We are soliciting tutorials for PSCE 2009.

**Career Promotion and Workforce Development: Flueck**

Satish Ranade is moving up into the Chair position and Anurag Shrivastava is coming in as the Vice Chair. Zeb Tate will be the new Secretary. There are lot of exciting happening in our subcommittee partly due to the Workforce Collaborative with which our subcommittee was closely associated. We will talk about that more when Wanda Reder comes for her presentation. Both the career videos are available on CD. Karen Miu has been shipping them overseas. If anybody doesn't have a copy, let us know because we have a few hundred available. The original career video, the high school version, which was done in 1996, is on ieev.tv. He will be working to get the other one posted as well. There are some other really good videos there. The one on Grid done last year by Peter Wiesner has great material. Pathfinder for Power and Energy is one of the other major initiatives of the subcommittee. Flueck asked attendees to send him an email on ideas for something that should be linked to

the pathfinder He will be going through all of the links to make sure everything is up to date. There is a panel session tomorrow morning on pre-college activities. Since workforce is one of the themes for GM 09, we'll be organizing a panel session for Calgary.

Sauer mentioned that there are applets on power systems on the PES website too. Flueck provided additional information and said that there are roughly 500 hits per month to these applets just through a page on power grid on Wikipedia. Heydt said that he saw a pretty good short video Monday morning and wanted to know if it logical to put that also on the website. Flueck said that the video, which in on name change of PES, is already on the iee.tv page. There are about 20 different videos on iee.tv of which about eight are related to power. [

### **Research subcommittee: Niebur**

The main focus of the meeting held on Sunday was essentially to look at future activities. The NSF CAREER panel will take place on Thursday. Based on its success, it will be repeated at PSCE in Seattle if the speakers are available. In addition, five panels are proposed for GM 09, which are 1) Integration of Renewal Energy – Anil Pahwa, 2) Second Career Panel – Dagmar Niebur, 3) Plug-in Hybrid Vehicles - Mariesa Crow, 4) Microgrids – Bill Rosehart, and 5) Africa Activities – James Momoh. Crow asked if she has put mentoring efforts for young faculty suggested by Mitra and Miu in the list of panel sessions. Niebur replied that the subcommittee wanted to make this part of the committee activities and could be presented in the main PEEC meeting similar to the presentation on NSF CDI initiative that is planned for this meeting. Niebur urged all those present to ask young faculty members and graduate students to sign up for the respective listserv to get latest information on the activities. Heydt proposed adding another panel session called Synchronized Measurements in Power System Operation: International Practices and Research Issues, which is being organized by Elias Kyriakides of University of Cyprus. Based on some discussions it was decided that this panel would be co-sponsored by Power System Dynamic Measurements Working Group.

### **University Education Activities: Chowdhury**

There is a panel session on Wednesday on Educating the Power Engineers of the future from 2:00 to 5:00 pm. The subcommittee also discussed future panel session and since renewable energy is a current topic, there was a suggestion on doing something on renewable energy education. It's a good idea but subcommittee decided to wait a year to allow potential panelists to further develop their work in this area. The subcommittee is proposing a panel on Channeling University Research into Classroom Education at both the undergraduate and graduate levels. The subcommittee wants to bounce it off to the committee for their opinion. Another idea is to have a panel on Making Graduate Education Attractive for domestic students. It is very hard to get enough domestic students to pursue graduate studies and this panel would focus on ideas on reversing this trend. Flueck added that it's a very good idea. He has been working with Workforce Collaborative and has found that most of the industry has big skepticism about research and the need for research at universities. So being able to show that research has an affect on the classroom is very good. He suggested expanding it a bit because not all educational institutions, like online education, relies on research for the faculty. So there is a question that has been raised about whether research is even needed to educate the power engineer in the future. Chowdhury said that he will chair the session and is

looking for volunteers to participate. Heydt suggested that Niebur or someone from NSF should be included in the panel to provide NSF's perspective on value of integrating research into education. Niebur said that this is part of broader impacts of research proposals. The proposals should just not include a sentence or so in this area, but provide a specific plan on achieving this, which may include outreach activities. She agreed to be a panelist. Crow reminded all the panel organizers to watch for the due dates for GM 09 as well as PSCE 09 to complete the submissions on time.

#### **Procedures and Operations Manual and Openings for Officers: Pahwa**

Pahwa said that he needs feedback from the subcommittee chairs to update the Procedures and Operations Manual of the committee. Butler-Purry said that the version on the web is the old one, which need updating. She had sent a request to all the subcommittee chairs to update their sections, but she didn't get such response. Pahwa said that he will look into it and follow it up in the coming year.

Pahwa reviewed the needs for new officers and said that a new Secretary will be needed for Student Activities Subcommittee starting from 2010. Sauer said that Lin Ling Fan from North Dakota State is interested in this position. He also said that Secretary's position in University Education subcommittee is open and asked members to contact Chowdhury if they have any people interested in this position

Niebur said that the Research Subcommittee would need a new Secretary in 2010 and she said that someone from within the subcommittee can be recruited. But if some people have an outside person in mind, they should ask that person to at least attend one meeting of the subcommittee before they can be nominated. Brahma will be rotating out as chair of the Life Long Learning Subcommittee after the next General Meeting. At that time they will also need a new Secretary.

Crow said that we would send an announcement out on the US Power Faculty list with these openings and invite people to volunteer. She also asked the members to ask young faculty to join the US Power Faculty list and to forward the announcements to them. Heydt suggested that the announcement should also be sent on Power Globe to reach the international audience.

#### **Workforce Collaborative Presentation: Wand Reder**

The business meeting was suspended at this point for IEEE PES President Wand Reder's presentation on Workforce Collaborative. The presentation focused on outcomes of a workshop PES had organized in November 2007 in collaboration with NSF and industry to reinvigorate interest in power systems area and to address the workforce development issues. The presentation was followed by lively discussions by the members with very useful comments to make it successful. Details on the Workforce Collaborative can be found at [www.ieee.org/go/pes-collaborative](http://www.ieee.org/go/pes-collaborative).

#### **Student Activity Subcommittee. Rosehart**

The subcommittee primarily been looking after the student poster contest at the general meeting and the T&D meeting as well as the student housing program which has been used

to help support the housing costs for students to attend these meetings. For this general meeting, 74 students entered the poster contest, which took place Monday night with the regular Monday night poster session. The subcommittee has produced an abstract booklet of the posters, which will be archived on the PEEC website. This will allow the students to cite their work in the future and thus students would get a little extra credit for their efforts. The subcommittee is in good shape regarding future officers with three people waiting in line to become officers. We are looking at possibility of having a team design competition for T&D and PSCE conferences. Rosehart provided some ideas but mentioned that details have not been worked out yet. He thanked all the members who helped judging the student posters. Sauer asked if the subcommittee has determined the budget issues for the three meetings in 2009. Rosehart responded that there were some uncertainty in terms of this subcommittee supporting NAPS, but those issues have been resolved and appropriate amount of money has been allocated to cover PSCE, GM, and NAPS for 2009. Exact split of money between these events is not known at present due to incomplete information of hotel costs.

#### **NAPS 2008: Rosehart**

Rosehart thanked his colleagues for their support in organizing NAPS and recognized Zareipor, who was in the meeting. There are 172 paper submissions and he thanked the members for their help in reviewing papers. There are a lot of interesting things to do in Calgary and the program committee is trying to set up a nice program. The dates of the meeting are from September 28 to 30.

#### **Industry Education Advisory Committee: Kundur**

Crow said that this committee has asked PEEC to oversee the development of 'Expert Now' modules and asked Kundur to provide more information. Kundur said that these modules are online modules and typically are of one-hour duration. There is a huge demand for these because based on his experience he feels that very few people can physically attend the tutorials. On his recent trips to Central America and South America, he was given a long list of topics by PES members. So this is a way of promoting our educational activities. So far this process has been informal and he would like to formalize it by creating a subcommittee. The charge of the subcommittee will be to identify topics and respective instructors. Crow said that three modules are already in preparation and three more have to be identified. Kundur said that the three under progress are on Distributed Generation, Power Quality, and Distribution Automation, and they are at different stages of preparation. The target is to finish them by early next year. Another topic of interest is electricity market, but he would like the PEEC subcommittee to pick these topics. Crow said that the approval process is very simple. The authors write a short abstract or an outline that goes to Kundur for approval. So really this task force is tasked with just simply identifying people and getting their commitment to do it. In terms of time commitment it is not overwhelming but we need someone to do it. Kundur said that the people who produce the module get \$2000. Also, there will be a fee to see these modules and thus it will be a revenue generating activity. The money such generated can be used to produce additional modules. This was followed by additional discussions and Crow asked for a volunteer to head the taskforce. Members felt that instead of creating a subcommittee it should be handled as a Task Force within the LLL subcommittee. In addition to Crow, Niebur, Vittal, Johnson, Venkata, and Mitra volunteered for the Task Force.

**Status of PEEC: Venkata**

Venkata, who is member of Technical Committees Adviosry Board, mentioned that the scope of this board is to reevaluate scopes of different committees and their websites to discuss their reconstitution. Although PEEC is formally not a technical committee, its scope should be well defined and updated to protect it during reconstitution. Crow responded that the scope is defined and it is on the web site. The website is not fully updated but the Procedures and Operations Manual is updated. Crow said that she would like PEEC to be a Technical Committee. Venkata suggested contacting Damir Novosel if we are not happy with the current status of PEEC. Venkata said that PEEC was a technical committee, but about ten years ago during reorganization it was taken out of the Technical Council. He agreed to report the feeling of PEEC members to the board on this issue. Some members felt that it was okay not be a part of the technical council. Some members felt that the committee is not getting appropriate recognition for its work and contributions. This was followed by vigorous discussions and comments from several people, but consensus was reached.

Kundur said that this committee should have at least 50% membership from industry because industry has a big role to play. Heydt said that it is a great idea but industry members are hard to recruit. We do have a few industry members and they are really good members. Kundur concluded by saying that we should make it a goal to find members.

**Adjourn:**

The business meeting was adjourned by Crow and she announced that a presentation and discussion on Cyber Discovery and Innovation will follow after a short break.

Submitted by,

Anil Pahwa